EXPLORATION AND MINING in British Columbia 2007

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Ministry of Energy, Mines and Petroleum Resources

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Front Cover:
Exploration drilling continued on the Serengeti Resources Inc discovery during 2007. Serengeti completed some 22 000 m of diamond drilling to delineate the Kwanika porphyry Cu-Au-Mo deposit within the Quesnel terrane, about 40 km east of Takla Landing and 85 km north of Mount Milligan. 2007 results released to date showed impressive copper-gold grades; for example, borehole K-07-29 intersected 48.6 metres of 0.75% Cu and 2.5 g/t Au, and K-07-28 intersected 322 m of 0.40% Cu and 0.40 g/t Au.

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FOREWORD

INTRODUCTION

British Columbia's regional geologists publish an annual review of mineral exploration and mining activity for their region. These reviews are based upon their personal knowledge of many of the properties and mine sites in their district complemented by information provided by individuals and companies working in the mineral industry. The province's exploration sector for coal, industrial minerals and metals is so large that these reviews must focus on the larger and/or more advanced projects. For more information about a specific region, you are encouraged to contact the appropriate regional geologist (contact information below). For a provincial overview, please consult *British Columbia Mines and Mineral Exploration Overview*

http://www.empr.gov.bc.ca/Mining/Geolsurv/Publications/catalog/cat_exrev.htm

The world is in the midst of a mining boom driven by high demand for many coal and mineral commodities resulting in high commodity prices. British Columbia has fared well during the mining boom because of its rich natural resources, well developed infrastructure, supportive government and secure tenure. The demand for commodities is primarily driven by Asian countries with rapidly growing or strong economies, such as China, India, Japan and Korea. These countries are natural trading partners for British Columbia given the province's easy access to the Pacific Ocean and shorter shipping distances to Asia than many of its competitors.

MINERAL EXPLORATION 2007

Mineral exploration investment expenditures in British Columbia soared to a record level of $416 million dollars during 2007. This is an increase of more than 50% from the 2006 level and saw all but one region, the Northeast, increase significantly from the previous year. There were one hundred projects that spent more than a million dollars on exploration activity. Similarly, exploration drilling increased by over 50%, reaching about 1.254 million metres, up from the 830 000 metres drilled in 2006. British Columbia mining and exploration companies raised $6 Billion in risk capital in 2007. This is approximately 40% of the $16.4 Billion total raised across Canada.

One result of the mining boom has been that many companies were unable to complete programs due to the shortage of drills, drillers, field crews and/or helicopters. As well, delays in receiving analytical results were common and companies have been slower to report their results.

MINING 2007

The mining industry continues to grow in British Columbia with both new mines and mine re-openings over the last three years. There are currently 10 coal and 11 metal mines, 36 industrial mineral operations, and numerous aggregate quarries in production. In 2007, new mines and quarries opened at four sites. The Brule coal mine opened in the Peace River coalfields and the Max molybdenum mine near Trout Lake started up. The Swamp Point and Orca quarries, located south of Stewart and near Port McNeill respectively, began shipping aggregate.

There is good reason to anticipate more mine developments over the next 5 years. There have been more than 20 proposals for new mines and quarries submitted to government for review and approval with respect to the government's environmental, safety and sustainability requirements. As well, there are a number of advanced exploration projects with plans to complete feasibility studies and considering mine development. In 2007, the Galore Creek and New Afton copper-gold projects were approved to proceed to production. Unfortunately the former project was put on hold by the operators in November pending review of alternate development strategies as a result of unexpectedly high development expenditures.

ACKNOWLEDGMENTS

This *Exploration and Mining in British Columbia* volume is made possible by the hard work and expertise of the five regional geologists. The articles have been improved by review and coordinated for the volume by George Owsiacki, Garry Payie and Brian Grant.

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NORTHWEST REGION

By Paul Wojdak, PGeo
Regional Geologist, Smithers

SUMMARY AND TRENDS

The year was characterized by robust mine performance, great strides toward new mines and a frenetic pace of exploration, all fueled by the continuing high price for molybdenum, copper, gold, silver and zinc. There were announcements of increased ore reserves and construction of new mines. Owners of the Endako molybdenum mine are considering a major upgrade of its 42 year-old mill by a new facility with nearly twice the capacity. Even at the proposed higher mining rate, reserves at Endako are sufficient to 2024. With reserves until 2010, operations continued normally at the Huckleberry copper-molybdenum mine despite a major slide in the East pit, as mining switched to a new pit. Gold and silver production declined at Eskay Creek as ore reserves near exhaustion and the mine moves toward closure in early 2008. Mine production and reserves are listed in Table 1.1.

Four new mines and one temporarily closed mine were in development in 2007. Total development expenditure on these five projects, separate from exploration spending, is estimated at C$385 million. The Galore Creek copper-gold mine began construction on June 5 and up to 700 people were employed, chiefly building the access road and related construction camps. On November 26 Galore Creek construction was suspended by the operating partners due to escalating costs. A comprehensive review began to evaluate alternative development strategies. A production decision for the Ruby Creek molybdenum mine was announced on September 19. Limited construction activities began on the Tulsequah Chief copper-lead-zinc-silver-gold mine pending an amendment to its environmental approval certificate. The Swamp Point aggregate pit on the Portland Canal, which began development in late 2006, commenced barge shipments to Prince Rupert for construction of a new container port facility. Underground development began to re-open the Table Mountain gold mine but was put on hold while its owner merges with another junior company. A host of other projects progressed through Environmental Assessment, the mine approval process. These include the Kutcho Creek copper-zinc, Morrison copper-gold, Davidson molybdenum, Mount Klappan coal and Schaft Creek copper-molybdenum-gold projects. Looking forward to 2008, up to four more projects are expected to begin the approval process; Kerr-Sulphurets gold-copper, Turnagain nickel, Lucky Ship molybdenum and Berg copper-molybdenum.

Mineral exploration expenditures reached a new high of $170 million, a 30% increase over 2006 (Figure 1.1). Sixty-three projects exceeded $500 000 in expenditure. There were 82 drilling projects. Several new diamond drilling contractors had successful start-up years as drill rigs were in high demand; a number of projects used two, three or even four machines. Total exploration drilling in the region increased once again to about 374 000 m (Figure 1.2). Most projects now have resource estimates that are compliant with current Securities Commission standards. Major exploration projects are listed in Table 1.2.

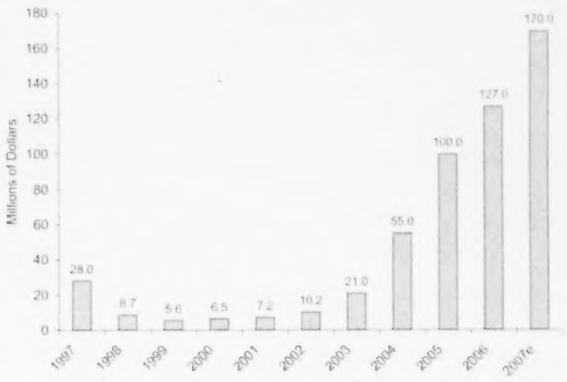

Figure 1.1. Annual exploration spending, Northwest Region.

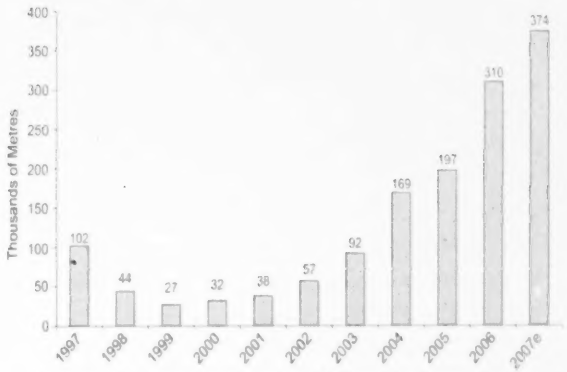

Figure 1.2. Annual exploration drilling, Northwest Region.

TABLE 1.1. MINE PRODUCTION AND RESERVES, NORTHWEST REGION

Mine	Operator	Employment (2007)	Production (2006)	Reserves (effective date)
Endako	Thompson Creek Metals Company & Sojitz Corporation	288	5160 tonnes Mo	112 MT at 0.053% Mo (Proven); 164 MT at 0.049% Mo (Probable) on April 30, 2007
Eskay Creek	Barrick Gold Corp	168	3324 kg (106 880 oz) Au, 216 235 kg Ag	123 000 T at 25.9 g/t Au, 1329 g/t Ag on Dec 31, 2006
Huckleberry	Huckleberry Mines Ltd (50% Imperial Metals Corp)	250	32 126 tonnes Cu, 139 tonnes Mo	21.9 MT at 0.400% Cu, 0.007% Mo (Probable) on Dec 31, 2006
Fireside	Fireside Minerals Inc		12 000 tonnes barite	Not available

Porphyry copper-gold, copper-molybdenum and molybdenum deposits were the most popular exploration targets and occur mainly in the Stikine district and the Skeena Arch. Gold and silver were targeted in a variety of epithermal, mesothermal and orogenic vein deposits mainly in the 'Golden Triangle' near Stewart and near Atlin. Polymetallic volcanogenic massive sulphide deposits were sought in several areas. The high volume of core drilling delayed analytic results even more than in 2006 so that the significance of many programs is unknown or incomplete at the time of writing. Exploration highlights include:

- Kerr-Sulphurets and Snowfields (adjoining properties on a continuous mineral zone that is emerging as a huge bulk-tonnage gold-copper resource)
- Red Chris (a one kilometre intercept grading 1% Cu and more than 1 g/t Au)
- Ball Creek (long drill intercept suggests a new gold-copper porphyry prospect)
- Ajax (significant increase in molybdenum deposit size and grade indicated)
- Lone Pine (extensive 'new' molybdenum mineralization intersected)
- Treaty Creek (two new gold and silver showings discovered following glacial recession)
- Dilworth (newly recognized gold and silver zones)
- Porcher Island (new gold vein discovered near old mine workings)
- Iskut (new 'Besshi-type' copper massive sulphide discovery)
- Jade at Provencher Lake (block of exceptional quality recovered)

The Rossing uranium project is noteworthy because it is a large, truly grass-roots reconnaissance program, unusual in recent decades. Employing a dedicated helicopter and a wide-ranging field crew of geochemical samplers and prospectors, it is the type of program that was commonly conducted by major companies until the early 1980s that can lead to discovery of new showings.

MINES AND QUARRIES

METAL MINES

The **Eskay Creek** mine (MINFILE 104B 008), owned by Barrick Gold Corporation, produced 3324 kg (106 880 oz) of gold and 216 235 kg of silver in 2006. The total amount mined was 141 777 tonnes of which 18 128 tonnes was direct-to-smelter ore. Ore supply in 2007 was from pillar recovery and the draw-down of a low-grade stockpile. The reserve grade at the beginning of 2007 was 25.9 g/t Au and 1329 g/t Ag. Only milling ore was produced in 2007; the supply of direct-to-smelter ore was exhausted in 2006. Eskay Creek mine is scheduled to close in early 2008. Since start-up in 1995 Eskay Creek has produced more than 100 tonnes of gold and 5000 tonnes of silver. The labour force at the mine was gradually reduced and at year-end was less than half than was required at the peak of production.

Eskay Creek is a volcanogenic massive sulphide deposit with exceptional gold and silver content and occurs at the top of the early Jurassic Hazelton Group. Higher-grade ore is stratabound and occurs in a contact mudstone. It is underlain by a rhyolite flow-dome complex and overlain by basalt and sedimentary rocks in the west limb of a north-plunging fold. Lower grade ore occurs in discordant zones in the underlying rhyolite and dacite. Sphalerite, pyrite, tetrahedrite and galena are the most abundant ore minerals. Gold occurs mainly as microscopic grains between and within sulphide minerals, or locked in pyrite. The mine is an underground trackless operation which utilizes a drift-and-fill mining method with cemented rock backfill. The gravity and flotation mill has a capacity to treat 330 tonnes of ore per day.

TABLE 1.2. MAJOR EXPLORATION PROJECTS, NORTHWEST REGION

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Ajax	Tenajon Resources Corp	103P 223	Mo	Porphyry	DD (2639 m, 12 holes)
Barbara Anne	Mountain Boy Minerals Ltd	104A 178	Pb, Zn, Ag	VMS	DD (4245 m, 31 holes)
Ball Creek	Paget Resources Corp	104G 018	Cu, Au	Porphyry	G, P, GC; DD (2920 m, 15 holes)
Berg	Terrane Metals Corp	093E 046	Cu, Mo	Porphyry	IP; DD (11 289 m, 29 holes); EN
Big Onion	Eagle Peak Resources Ltd	093L 124	Cu, Mo	Porphyry	A; DD (16 632 m, 62 holes)
Bronson Slope	Skyline Gold Corp	104B 077	Au, Cu	Porphyry	R; DD (4000 m, 11 holes); MS
Coastal Copper (Double Ed)	Kenrich-Eskay Mining Corp	103P 025	Cu, Zn	VMS	GC; DD (2583 m, 7 holes)
Coles Creek	Callinan Mines Ltd	093E 042	Cu, Mo, Au	Porphyry	DD (2644 m, 8 holes)
Copper Canyon	NovaGold Resources Inc	104G 017	Cu, Au	Porphyry	DD (4940 m, 12 holes)
Copper Creek	Firesteel Resources Inc	104J 035, 018, 005	Cu, Au	Porphyry	R; DD (1006 m, 4 holes)
Copper Pendant	SNL Enterprises Ltd		Cu, Zn	VMS	G; GC; DD (1164 m, 4 holes)
Corey	Kenrich-Eskay Mining Corp	104B 240, 387	Au, Ag	Epithermal VMS	GC; DD (5754 m, 21 holes)
Davidson (Yorke-Hardy)	Thompson Creek Metals Company	093L 110	Mo	Porphyry	EN; FS; DD (5306 m, 18 holes)
Del Norte / Midas	Sabina Resources Limited	104A 176, 161	Au, Ag	Epithermal Vein	DD (1600 m, 9 holes)
Dilworth (Helen)	Ascot Resources Ltd	104B 039, 142	Au, Ag	Epithermal	G; P; TR; DD (4855 m, 36 holes)
Eaglehead	Carmax Explorations Ltd	104I 008	Cu, Au	Porphyry	IP; DD (4098 m, 12 holes)
Electrum	American Creek Resources Ltd	104B 033	Au	Vein	DD (12 500 m, 45 holes)
Endako	Thompson Creek Mining Ltd	093K 006	Mo	Porphyry	G; AB-EM & RD; DD (10 928 m, 66 holes)
Galore Creek	Galore Creek Mining Corp	104G 090-099	Cu, Au	Alkalic Porphyry	G; P; DD (5656 m, 16 holes)
GJ (Kinaskan)	Canadian Gold Hunter Corp	104G 034, 086	Cu, Au	Porphyry	IP; MG; DD (15 833 m, 80 holes)
Grace	Galore Creek Mining Corp	104G 067	Cu, Au	Porphyry	CD; GD (7056 m, 20 holes)
Grace	Pioneer Metals Corp	104G 088	Cu, Au	Porphyry	G; GC; IP; P; DD (5207 m, 13 holes)
Homestake Ridge	Bravo Venture Group Inc	103P 216, 082, 093	Au, Ag, Zn	Vein or stratabound	DD (9320 m, 28 holes)
Huckleberry Mine	Huckleberry Mines Ltd	093E 037	Cu, Mo	Porphyry	GC; RC (74 holes); EM; MG; DD (3600 m, 25 holes)
Iskut (Johnny Mountain)	Spirit Bear Minerals Inc	104B 107, 264	Au	Vein, Porphyry	G; P; GC; DD (3000 m, 5 holes)
Jack Wilson	Romios Mines Inc	104G 021	Cu, Au	Porphyry, vein	AB-EM & MG; DD (484 m, 3 holes)
Kerr-Sulphurets	Seabridge Gold Inc	104B 103, 176, 182	Au, Cu	Porphyry	MS; DD (15 300 m, 37 holes)
Kutcho Creek	Western Keltic Mines Inc (Sherwood Copper Corp)	104I 060	Cu, Zn	VMS	EN; FS; GD; OB

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Lone Pine	Bard Ventures Ltd	093L 027, 028	Mo, Cu	Porphyry	IP; MG, DD (~7300 m, 23 holes)
Louise Lake	North American Gem Inc	093L 079	Cu, Mo, Au	Porphyry	MS; DD (6278 m, 20 holes)
Lucky Ship	New Cantech Ventures Inc	093L 053	Mo	Porphyry	DD; GD; CD (15 139 m, 50 holes); EN; PF
Morrison	Pacific Booker Minerals Inc	093M 007	Cu	Porphyry	EN; MS; PF; GD (898 m, 31 holes)
Mount Klappan	Fortune Minerals Limited	104H 020-022	Anthracite	Coal	EN; PF
Mountain Boy	Mountain Boy Minerals Ltd	104A 011	Ag, Au, Cu, Zn	Vein	DD (2179 m, 27 holes)
Nass Bay (Kincolith)	Nass Valley Gateway Ltd		Granite	Aggregate	DD (3000 m, 23 holes); MK
Newmont Lake	Romios Gold Resources Inc	104B 281, 282	Au, Ag	Skarn, VMS	G; AB-EM; IP; MG; DD; (1215 m, 9 holes)
New Moon	Anglo Columbia Mines Inc	093E 011	Cu, Zn, Ag, Au	Vein, skarn, VMS	AB-EM & MG; G; P
New Polaris	Canarc Resource Corp	104K 003	Au	Mesothermal Vein	EN; PF
Peak	Grizzly Diamonds Ltd	093M 015	Au, Ag	Vein, replacement	EM; DD (2293 m, 22 holes)
Porcher Island	Cross Lake Minerals Ltd	103J 017	Au	Vein	DD (11 998 m, 39 holes)
Red Bird	Torch River Resources Ltd	093E 026	Mo	Porphyry	GC; DD (2645 m, 10 holes)
Red Chris	Imperial Metals Corp	104H 005	Cu, Au	Porphyry	G; MG; MS; DD (4834 m, 6 holes)
Red Cliff	Mountain Boy Minerals Ltd	104A 037	Au	Vein	DD (8570 m, 41 holes)
Rocher de Boule	Rocher Deboule Minerals Corp	093M 071	Cu, Au	IOCG	DD (1106 m, 6 holes)
Rossing	Garnet Point Resources Corp	104O 010	U, Mo, REE	Intrusion-related	G; GC
Ruby Creek	Adanac Molybdenum Corp	104N 052	Mo	Porphyry	DD (2269 m, 6 holes); OB (478 m); RC (162 m); CD
Schaft Creek	Copper Fox Metals Inc	104G 015	Cu, Mo, Au	Porphyry	G; MG; IP; CD, GD (6300 m, 41 holes)
Seel & Ox Lake	Gold Reach Resources Ltd	093E 105	Cu, Au	Porphyry	IP; A; DD (9373 m, 38 holes)
Shan	BCM Resources Corp	103I 114	Mo	Porphyry	AB-MG; DD (9238 m, 31 holes)
Silver Coin	Pinnacle Mines Ltd	104B 095	Au, Ag, Pb, Zn	Vein	DD (2764 m, 15 holes)
Snip North	Newcastle Minerals Ltd	104B 089	Au	Vein	DD (1200 m, 6 holes)
Snowfield	Silver Standard Resources Inc	104B 179	Au, Mo	Porphyry	DD (8500 m, 29 holes)
Storie	Columbia Yukon Explorations Inc	104P 069	Mo	Porphyry	IP & MG; DD (23 066 m, 76 holes)
Surprise Creek	Pinnacle Mines Ltd		Au, Ag, Cu, Zn	VMS	DD (1995 m, 4 holes)
Tag	CZM Capital Corp	104M 079, 080	Au, Ag	Epithermal Vein	GC; P; AB-MG; DD (4650 m, 26 holes)

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Taurus	Cusac Gold Mines Ltd	104P 010, 011	Au	Orogenic vein	G; MS; DD (2623 m, 15 holes)
Tide	American Creek Resources Ltd	104B 129	Au, Ag	Intrusion-related	G; TR; DD (1835 m, 8 holes)
TJ Ridge	Roxgold Inc	094D 031	Au, Ag	Epithermal vein	A; TR; AB-EM & MG; DD (2900 m, 18 holes)
Todd Creek	Goldeye Explorations Limited & Polar Resources Ltd	104A 001	Cu, Au	Vein, Porphyry	G; GC; IP & MG; DD (2815 m, 12 holes)
Treaty Creek	American Creek Resources Ltd	104B 078, 372	Au	Epithermal	G; GC; P; DD (5470 m, 30 holes)
Tulsequah Chief	Redfern Resources Ltd	104K 002	Cu, Zn, Ag, Au	VMS	A; EN; FS; R; DD (12 484 m, 36 holes)
Turnagain	Hard Creek Nickel Corp	104I 119, 120	Ni	Magmatic	MS; DD (24 500 m, 74 holes)
Voigtberg	BC Gold Corp	104G 146	Au	Porphyry	G; AB-EM; P; DD (587 m, 4 holes)
Yellow Jacket	Prize Mining Corp	104N 043	Au	Orogenic Vein	G; BU (10 000 t); PP

Work Program Abbreviations:

A = access; trail, road construction on claims; AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X tonnes) = bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (Xm) = diamond drilling totaling X metres; EN = environmental baseline studies monitoring, remediation work; FS = feasibility studies; G = geology, mapping, etc; GC = geochemical sampling (rock, soil, silt, etc); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; 3D-IP; MG = magnetics; MK = marketing-primarily for industrial mineral products; MS = metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; PP = Pilot plant, R = reclamation; RC = reverse circulation drilling; TR = trenching, UG (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

The **Endako** open-pit molybdenum mine (MINFILE 093K 006) is operated by Thompson Creek Metals Company (formerly Blue Pearl Mining Ltd) which owns 75% interest. Sojitz Corporation, a major Japanese-based molybdenum trading company, holds 25% interest. Molybdenum production for 2006 was 5160 tonnes from 9 526 000 tonnes of ore with an average grade of 0.069% Mo. The mill normally processes 28 000 tonnes per day and recovers about 78% of the molybdenum sulphide, all of which is converted to molybdic oxide in an on-site roaster.

The company commissioned a review of ore reserves at cut-off grades of 0.02, 0.03 and 0.04% Mo. At a 0.03% cut-off, the measured and indicated resource totals 331.2 million tonnes grading 0.051% Mo. At the same average grade, proven and probable reserves total 276 million tonnes. Next, based on the new resource estimate, Thompson Creek commissioned a feasibility study of building a new 50 000 tonnes per day mill. Capital cost of the project is estimated at C$373 million. The project shows a favourable economic return based on a long-term molybdenum price of US$14 per pound starting in 2012. An expected increase in molybdenum recovery to about 82% contributes to the positive feasibility analysis. At time of writing a decision by the joint owners had not been made.

Endako is a porphyry molybdenum deposit within the early Cretaceous Francois Lake granite batholith. Mineralization is related to an aplitic phase that intrudes an older coarse-grained variety. The ore body is a 3.5-kilometre long stockwork zone that is elongated to the west-northwest and dips about 50° south to a depth of 330 m. The hanging wall of the ore zone is delineated by the South Basalt fault. Post-mineral cross faults segment the ore zone into three pits; the principal Endako pit, the smaller Denak pit and, furthest to the west, the partially developed Denak West pit. In the long-term mine plan these will merge into a large 'superpit'. Instability on the south wall of the Endako pit has been problematic since 2001. According to the 2007 mine plan, all ore was to be supplied from the Endako pit but a large slide on November 12 resulted in a temporary cessation of work (Figure 1.3). Mining was relocated to Denak West, supplemented by recovery of ore from a low-grade stockpile. Wall instability in the Endako pit results from two mechanisms; shallow-dipping, molybdenite-bearing faults that trend across the face of the south wall and the wedge-shaped intersection of close-spaced fractures with several cross faults (see *EMBC-2002*, page 5). The wedge-shaped intersection(s) have a moderate dip and are undercut by the pit benches. Susceptibility of the wedge blocks to move is enhanced by the molybdenite-lubricated faults.

Figure 1.3. Mining equipment was trapped temporarily but not damaged by the Nov. 12 slide in the Endako Pit.

Figure 1.4. Wall failure ended mining in the East pit at Huckleberry mine.

A 1340-kilometre airborne magnetic and radiometric survey was flown over the mining lease. The ore zone corresponds to a broad magnetic 'low' over the Endako and Denak pits but weakens to an indistinct pattern over Denak West (J. Schroff, pers. comm., 2007). The ore-controlling South Boundary fault does not have a magnetic signature but the northwesterly Casey fault is well defined. Right lateral offset of about 4-5 km is interpreted. The Casey Lake anomaly is a 400 m wide, 1000 m long, magnetic 'low' near the eastern projection of the South Boundary fault, and is where 2006 exploration drillholes intersected interesting levels of molybdenum. The Casey Lake zone, 500-1000 m east of the plant site, was explored by an 11 000-metre drilling program in 2007. The Casey Lake target extends under the tailings impoundment. An area near the West Denak pit was also tested.

The **Huckleberry** copper mine (MINFILE 093E 037) is operated by Huckleberry Mines Ltd and is owned 50% by Imperial Metals Corp and 32% by Mitsubishi Material Corp. The remaining 18% is shared equally among Dowa Mining Ltd, Furakawa Company Ltd and Marubeni Corp. The mine is located 123 km by road south of Houston at the foot of Huckleberry Mountain and employs 250 people including contractors. Copper production for 2007 is forecast at 30 000 tonnes, slightly less than 2006. In 2006 the mill processed 6 646 200 tonnes of ore grading 0.556% Cu and 0.015% Mo. Copper recovery in 2006 averaged 86.9% but molybdenum recovery was just 26.8%. Copper concentrate is trucked to the port of Stewart for shipment to Japan and molybdenum concentrate is trucked to Vancouver.

Mining in the East pit ended abruptly on June 22 when overburden and rock at the top of the north wall slid to the bottom of the pit (Figure 1.4). Total volume is estimated at 2 million cubic metres (5.4 million tonnes). All major equipment was removed from the pit on June 18 when open fissures were seen. It was planned to mine another 500 000 tonnes of ore from benches in the East pit and up to 700 000 tonnes from the pit walls, the latter dependent on wall stability. Due to the size of the slide the company chose to abandon the remaining East pit ore. The mill was supplied from a low-grade stockpile and the company accelerated its plan to produce ore from the Main zone extension pit. Stripping of waste material in the Main zone extension was already well advanced in preparation for mining ore. At the start of production, reserves in this new pit were 17.4 million tonnes at 0.366% Cu, above a cut-off grade of 0.22%, sufficient to maintain the mine to 2010.

Huckleberry is a porphyry copper deposit related to the late Cretaceous Bulkley intrusions. Copper mineralization occurs in two zones (Main and East) one kilometre apart and is developed within a granodiorite stock and in adjacent hornfelsed and fractured Hazelton Group volcanic rocks. The ore is a stockwork of quartz, pyrite and chalcopyrite, crosscut by gypsum-filled fractures. The Main and East zones are disrupted by the 105 Fault which resulted in 100 m of right lateral offset. The East zone is also disrupted by a younger structure, the 150 Fault which resulted in 200 m of right lateral displacement. The Main Zone Extension, outlined by drilling in 2004-06, is the faulted portion of the Main zone north of the 105 Fault. In the Main zone extension pit, the fault marks the sharp footwall truncation of high copper grade ore (P. Ogryzlo, pers. comm., 2007). Despite lower than mine-average molybdenum grade, recovery and consequent production of molybdenum are good. Flat drain holes are drilled into the high wall from pit benches immediately after they are mined, to reduce the risk of rock movement due to water pressure within the wall (Figure 1.5).

Exploration drilling focused on the 'saddle' between the Main zone and its northwest extension. Ability to mine this area will depend on the geotechnical characteristics of waste material (rock and tailings) in the Main zone pit, and this was investigated by drilling. An

Figure 1.5. Drain holes are drilled in the highwall of the Main Zone Extension pit at Huckleberry mine.

airborne EM survey over the property identified a target 2 km west of the Main zone and three targets to the east of the mine, near Kilometre 103, 107 and 113 on the 122 km mine access road. Drilling of the western target found graphite below a conglomerate at the base of the Hazelton Group (P. Ogryzlo, pers. comm., 2007). Exploration of the eastern targets is on-going.

Cusac Gold Mines Ltd attempted to reopen the **Table Mountain** gold mine (MINFILE 104P 070), closed since 1997, but encountered structural complexity in the Rory vein that resulted in down-grading of reserves. Production amounted to 19.7 kg (634 oz) of gold from 5615 tonnes of ore. Mine development refocused on the Bain vein where a probable reserve of 25 000 tonnes grading 17 g/t Au was identified. The company advanced a decline to 150 m from intersecting the East Bain vein when it intersected high water flow that resulted in a halt to mining on October 1. From surface, Cusac widened 205 m of the West Bain decline to the required 4.3 m width by 2.7 m height, and drove 306 m in the new underground heading. Various surface infrastructure upgrades were completed; refurbishing the mill, shops and office, improvements to the access road and restoration of the property power line. At time of writing, merger of Cusac Gold Mines with Hawthorne Gold Corporation was in progress. Exploration of the Taurus II bulk-tonnage gold zone is described in a subsequent section of this report.

INDUSTRIAL MINERAL QUARRIES

No mining took place in 2007 at the **Fireside** barite quarry (MINFILE 094M 003), located 125 km east of Watson Lake. Fireside Minerals Ltd of Calgary did, however, produce 4000 tonnes of barite from ore that was stockpiled in 2006. There was reduced demand for the product, which is used in the western Canadian oil and gas drilling industry. The geology and mining of the Fireside property is described by Wojdak in *GSB Geological Fieldwork – 2007* (in press).

Three jade properties were active in the Dease Lake and Cassiar areas: Cassiar, Polar Jade, and Provencher Lake. In the district, nephrite jade is found at the contact between tectonically emplaced serpentinite and argillite within both Cache Creek and Slide Mountain oceanic terranes. Cassiar Jade Contracting Ltd is the principal operator which furnished the following production data. The company produced 22 tonnes of high-quality jade by sorting rock in the waste dump at the closed **Cassiar** chrysotile asbestos mine (MINFILE 104P 005), employing up to 5 people. Cassiar Jade also produced about 10 tonnes from **Polar Jade** (MINFILE 104I 083) near Serpentine Lake. Glenpark Resources Ltd contracted Cassiar Jade to explore and mine jade at **Provencher Lake** (MINFILE 104I 073, 092). Jade boulders are entrained in glacial till. About 35 tonnes were produced, including a 12.5 tonne single piece of exceptional quality and high value (Figure 1.6); it is a jade-mining career highlight for Ernest Hatzl, principal of Cassiar Jade Contracting. A further 35 tonnes of jade was produced by re-cutting of stockpiled material from the **Kutcho Creek** jade deposit (MINFILE 104I 078). Trenching conducted at the **Jade Empress** property (MINFILE 104J 057) by Dynasty Jade Ltd found only poor quality material.

A private company, 24/7 Timber Limited, produced crushed granite rock from a quarry at **Tyee**, 25 km east of Prince Rupert on the Skeena River. The rock is from the Ecstall hornblende quartz diorite pluton and is being used in high-strength asphalt required for the Prince Rupert container port.

MINE DEVELOPMENT PROJECTS

Four new mines and one shut-down mine were under development in 2007. Construction began on the Galore Creek copper-gold mine on June 5. Adanac Moly Corp announced a production decision for the Ruby Creek molybdenum mine on September 19. Limited construction activities began on the Tulsequah Chief copper-lead-zinc-silver-gold mine pending an amendment to its environmental approval certificate. The Swamp Point aggregate pit on the Portland Canal, which began development in late 2006, commenced barge shipments to Prince Rupert for construction of a new container port facility. Efforts to re-open the Table Mountain gold mine are described in the preceding section. Total development

Figure 1.6. Jade of exceptional quality is prepared for marketing in China.

expenditure on these five projects, separate from exploration spending, is estimated at CdnS385 million.

NovaGold Resources Inc received approval to develop its **Galore Creek** property (MINFILE 104G 090, Figure 1.7) from the BC Environmental Assessment office on February 23. Federal approval under the Canadian Environmental Assessment process was given on June 4. A year earlier NovaGold entered into a comprehensive agreement with the Tahltan First Nation to support mine development. On May 23, 2007 NovaGold announced a 50-50 partnership with Teck Cominco to build the Galore Creek copper-gold mine. With all these necessary steps complete, NovaGold's Board of Directors approved the start of construction on June 5.

Construction accomplishments in 2007 include the helicopter-supported set up of 6 construction camps along the 130 km access route, the building of 40 km of driveable road, 25.5 km of pioneered road, 8 permanent bridges, including a major span of the Iskut River and 19 temporary bridges. Final access to the mine site will be through an 8-metre diameter, 4.5 kilometre-long tunnel (Figure 1.8). The northern portal of the tunnel, armored against snow avalanches, was completed and 80 m of the tunnel was excavated. The Galore Creek Mining Corporation (the name of the NovaGold – Teck Cominco partnership) and Barrick Corporation separately completed substantial drilling programs to evaluate mineral potential of the **Grace** claims (MINFILE 104G 067, 088). The tailings impoundment for the Galore Creek mine is largely on the Grace property and the two companies disputed its ownership. A negotiated settlement was announced on November 8, clearing any legal challenge to mine development. However, on November 26, NovaGold and Teck Cominco suspended mine construction. A review of the feasibility study and completion of the first construction season indicated substantially higher capital costs and a longer construction schedule that would render the project, as presently conceived and permitted, uneconomic at current consensus long-term metal prices. A comprehensive review to evaluate alternative development strategies was begun.

Based on work in 2006, the Galore Creek Measured and Indicated resource was revised upwards to 928.4 million tonnes grading 0.50% Cu, 0.28 g/t Au and 4.7 g/t Ag. Proven and probable reserves contained within this resource total 540.7 million tonnes grading 0.56% Cu and 0.30 g/t Au, at a 0.25% Cu equivalent cut-off.

Exploration drilling in 2007 focused on **Copper Canyon** (MINFILE 104G 017, Figure 1.9) where 4940 m was completed, and the **Butte** zone (MINFILE 104G 094). Drilling extended the strike length of the Butte zone to 500 m. The Copper Canyon holes tested areas where previous work detected significant gold associated with low copper content (S. Morris, pers. comm., 2007). All holes intersected significant mineralization, many in areas outside the current inferred resource boundary. Prior to the program, inferred resources at Copper Canyon stood at 164.8 million tonnes at 0.35% Cu, 0.54 g/t Au and 7.2 g/t Ag, at a 0.35% Cu equivalent cut-off. The third component to the program was initiation of district-scale grassroots exploration using detailed knowledge of mineralization controls at Galore Creek. The presence of pseudoleucite-bearing porphyritic rocks (Figure 1.10) is recognized to be one of the most important features.

Figure 1.7. View of development area in Galore Creek valley.

Figure 1.8. North portal of the Galore Creek access tunnel, entrance to the mine site in development.

The **Ruby Creek** molybdenum project received a BC

Figure 1.9. Copper Canyon copper-gold deposit; drill area is on the lower slope above the moraine.

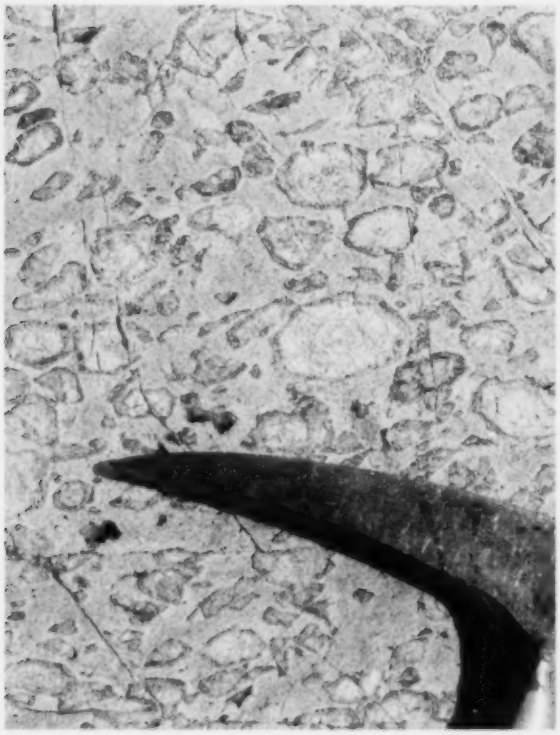

Figure 1.10. Zoned, hexagonal crystals of pseudoleucite in a volcanic rock at Galore Creek.

Environmental Assessment certificate on September 11 and Adanac Moly Corp announced the start of construction on September 19. A construction camp was erected 18 km east of Atlin at the outlet of Surprise Lake, to facilitate upgrading of the 15 km access road up Ruby Creek to the mine site. The Ruby Creek deposit (MINFILE 104N 052) has a measured and indicated resource of 212.9 million tonnes with a grade of 0.063% Mo, above a 0.04% Mo cut-off. Proven and probable reserves stand at 157 685 000 tonnes at an average grade of 0.058% Mo. Capital cost to build the mine and 23 000 tonne per day mill is estimated at C$640 million.

The Ruby Creek deposit is a wide-spaced, coarse-grained molybdenite-quartz stockwork in a multi-phase satellite stock of the Surprise Lake granite batholith. Flat-lying molybdenite veins occur mainly in coarse grained quartz monzonite (Figure 1.11) which is located above and peripheral to a flat-lying fine-grained phase, sparse quartz monzonite porphyry. The tabular, 150 to 200-metre thick, molybdenum zone underlies the floor of the valley near the head of Ruby Creek. The mineral zone is thought to be controlled by three steeply dipping faults: the north-trending Boulder Creek fault, the east-northeast Adera fault and the northwest Ruby Mountain fault (R. Pinsent, pers. comm., 2007).

Exploration drillholes in 2007 targeted the deposit's western extent north of the Adera fault. Fluorite is prominent in these holes, confirming geochemical characterization of the Ruby Creek deposit as a high-fluorine molybdenum system. Exploration holes also stepped to the southwest where the dip of the 'moly blanket' increases from flat to southwest. This gives rise to a deep exploration target in the nearby Hobo zone (R. Pinsent, pers. comm., 2007). Two kilometres southwest, the Black Diamond fault is parallel to the Adera fault. The Hobo zone, situated between these two structures, consists of quartz-wolframite veins in granite. Float rock near the Hobo trenches is an unusual phase of the granite, a diatreme breccia comprised of milled feldspar phenocrysts, hornblende and accessory fluorite. Tungsten, as wolframite, is known to occur above and peripheral to molybdenum deposits.

Redfern Resources Ltd completely revised proposed development access to the **Tulsequah Chief** and **Big Bull** copper-lead-zinc-gold-silver deposits (MINFILE 104K 002, 003). The project has a BC development certificate and federal environmental approval but construction of a 160 km access road from Atlin to the mine site was staunchly opposed by the Taku River Tlingit (TRT) first nation. The new plan is based on an air cushion barge that will be towed by an amphibious tug and operate year-round on the Taku River. The shipment of equipment and supplies during construction and operation, and the shipment of concentrate would all be done using this system, via Juneau Alaska. The revised plan led to signing of a letter agreement with the TRT to complete a joint study of the barging plan and to evaluate the scope and content of an Impact and Benefits agreement, should development of the 2000 tonne per day underground mine proceed. Capital cost is estimated at C$201.5 million.

Conventional ocean and river barges brought heavy equipment and material to assemble a temporary construction camp (Figure 1.12). The equipment began building the 17 km road from the barge unloading site near Big Bull to the new mill site situated at the historic Tulsequah Chief mine. This work was on-going at year

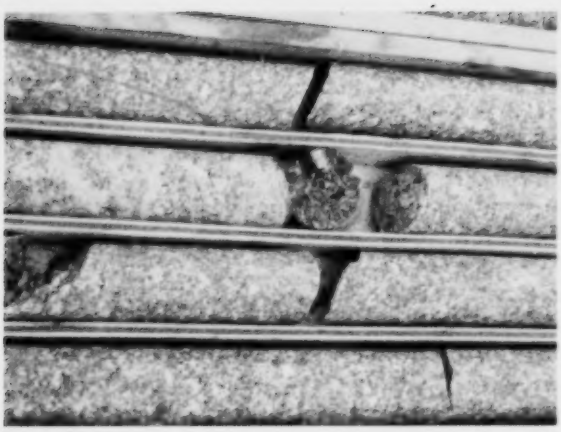

Fig 1.11. Molybdenite vein in coarse-grained granite, Ruby Creek deposit.

Figure 1.13. Megan O'Donnell and Mike Allen, project managers at Tulsequah Chief, share a lighter moment while examining drill core.

Figure 1.12. Construction camp near Big Bull, also the barge unloading point on a side channel of the Taku River.

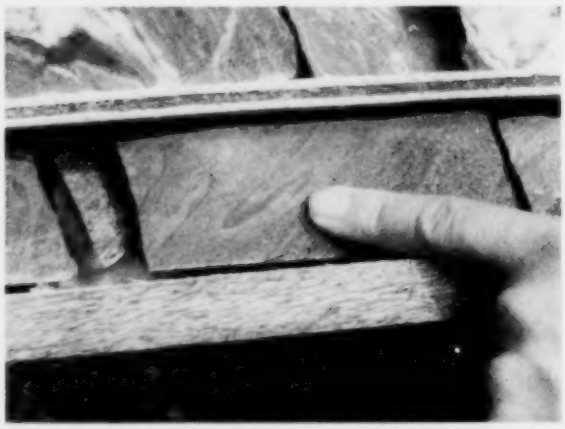

Figure 1.14. Big Bull 60-62 zone drill core that grades 26% Zn and 20 g/t Au.

end, and included construction of bridges and an airstrip. Earlier in the year, geotechnical assessment of the plant site and the tailings impoundment, a detailed topographic survey (LIDAR) and several environmental programs were completed.

The Tulsequah deposits are strataform massive sulphide layers in Devonian felsic volcanic rocks. The Tulsequah Chief deposit contains an indicated resource of 5 819 910 tonnes grading 1.43% Cu, 1.25% Pb, 6.58% Zn, 2.68 g/t Au and 97.2 g/t Ag, and an inferred resource of 950 000 tonnes at slightly lower grade. Probable reserves stand at 5 378 788 tonnes at an average grade of 1.40% Cu, 1.20% Pb, 6.33% Zn, 2.59 g/t Au and 93.7 g/t Ag. At Big Bull, the indicated resource is 211 000 tonnes at a grade of 0.40% Cu, 1.25% Pb, 3.33% Zn, 3.04 g/t Au and 161.7 g/t Ag. The Big Bull inferred resource has an appreciably higher precious metal grade; 669 000 tonnes at 0.35% Cu, 2.59% Pb, 5.97% Zn, 4.14 g/t Au and 194.8 g/t Ag. In 2007, twenty core holes at Big Bull focused on the exceptionally high grade 60-62 zone discovered in 2006 (Figure 1.13 and Figure 1.14). Fifteen core holes at Tulsequah Chief explored up-dip of the G-zone and A-zone extension. A total of 12 484 m was drilled.

Western Keltic Mines Inc continued to fulfill requirements of the Envirnomental Assessment process for the **Kutcho Creek** project during 2007. The work focused on road design, extensive fish studies, continued investigation of acid rock drainage, assessment of overburden and wildlife and bull trout and more fish studies. Submission of the Kutcho Creek Project Report is anticipated in early 2008. Western Keltic and the Kaska first nation (Dease River band) agreed to a funding arrangement whereby the Kaska will review the Project Report, and will negotiate a socio-economic participation agreement. A pre-feasibility study showed a favourable return for a 6000 tonne per day mine with an estimated capital cost of C$299 million. Late in the year, Western Keltic signed a letter of agreement by which it would be

acquired by Sherwood Copper Corporation. The deal is scheduled to close on January 29, 2008. Sherwood Copper is an operating company with a new open pit copper mine in Yukon.

Kutcho Creek is a volcanogenic massive sulphide deposit (MINFILE 104I 060) located 100 km east of Dease Lake. Three elongate sulphide lenses are arranged en echelon over a strike length of 3.5 km within schistose felsic volcanic rocks of early Triassic age. Measured and indicated resources in the three deposits total 17 690 703 tonnes grading 1.71% Cu, 2.36% Zn, 27.5 g/t Ag and 0.34 g/t Au. The inferred resource is estimated at 11 858 639 tonnes at 1.00% Cu, 1.58% Zn, 15.6 g/t Ag and 0.17 g/t Au.

On the **Mount Klappan** anthracite coal project Fortune Minerals Limited commissioned a preliminary economic assessment for the transportation of coal through a buried slurry pipeline. Three different routes are under consideration but the preferred route is thought to be south from the mine along the existing railway right-of-way to Minaret (about 150 km), and then southwest a further 150 km to New Hazelton where a coal loading facility would be built on the CN mainline for shipment to the under-utilized coal-loading facility at Ridley Island near Prince Rupert. This scheme would offset the high operating cost of trucking coal, and the attendant risk of escalating fuel cost, and reduce the project's environmental impact. Submission of the Project Report to the Environmental Assessment office is expected in the third quarter of 2008. The project contemplates a 1.5 to 3 million tonnes per year open pit mine.

The Klappan-Groundhog coalfield is in the northern Bowser Basin, a mid to late Jurassic marine basin filled with clastic sediments that culminated in a deltaic environment including coal measures. Anthracite is a premium coal with the highest rank, carbon and energy content, and lowest moisture and volatile content of all coals. It can be used in a wide variety of specialty applications including water purification, briquettes, as a metallurgical reductant in steel manufacture, and as an ultra-low volatile PCI coal (pulverized coal injection). Coal resources at Mount Klappan (MINFILE 104H 020-022) occur in four deposits which contain 107.9 million tonnes classified as measured, 123 million tonnes as indicated and 2.572 billion tonnes classified as inferred and speculative. These are compliant with current Securities Commission standards.

Imperial Metals Corporation was the successful bidder to acquire the **Red Chris** copper-gold property, 80 km south of Dease Lake, at the close of 2006. The Red Chris project has a BC Environmental Assessment Certificate. A federal court overturned the project approval under the Canadian Environmental Act on the basis that the federal environmental assessment was procedurally incorrect. This ruling is under appeal by the Minister of Fisheries and Oceans, the Minister of Natural Resources, the Attorney General of Canada and by bcMetals Corporation (a wholly owned subsidiary of Imperial Metals Corp).

Red Chris (MINFILE 104H 005) is a porphyry copper-gold deposit. Measured plus indicated resources in the Main and East zones, estimated in 2004, are 446.1 million tonnes grading 0.36% Cu and 0.29 g/t Au, at a cut-off grade of 0.2% Cu. The inferred resource in the Main and East zones is 268.7 million tonnes grading 0.30% Cu and 0.27 g/t Au. There is an additional inferred resource in the Far West and Gully zones of 116.0 million tonnes grading 0.32% Cu and 0.30 g/t Au, also at a 0.2% Cu cut-off. Open pit mine reserves at Red Chris, determined in 2004, are estimated at 276 million tonnes at 0.349% Cu and 0.266 g/t Au.

Imperial Metals drilled six deep holes at Red Chris in 2007, four in the East zone and two in the Main zone (Figure 1.15). The highlight of the program is an East zone hole that intersected 1024.1 m grading 1.01% Cu, 1.26 g/t Au and 3.92 g/t Ag and bottomed in strong mineralization. The results show the potential for a high grade mining resource extending 700 metres below the current pit design. The company reports that the horizontal area of high grade in the East zone, and the gold to copper ratio, both appear to increase with depth. Additional deep drilling at the East zone is planned for 2008.

At **Schaft Creek,** Copper Fox Metals Inc evaluated three site options for tailings impoundment and complementary plant sites, by geologic mapping, geophysical surveys and by drilling overburden and bedrock holes (Figure 1.16). Limestone was intersected at the preferred tailings site in the valley east of Mount LaCasse, which previous mapping inferred to be underlain by Stuhini Group volcanic rocks. The proposed pit wall was drilled to recover oriented core for geotechnical study. A 30 km access route was surveyed, to connect with the Galore Creek access road at the 65 km mark. The Environmental Assessment Project Report is expected in late 2008.

Figure 1.15. Geologists Lee Ferriera and Chris Rees at Red Chris.

Figure 1.16. Teresa Quock (left) is in charge of core sampling at Schaft Creek.

Schaft Creek (MINFILE 104G 015) is a large porphyry copper deposit that also contains molybdenum, gold and silver. Measured and indicated resources, at a 0.25% Cu equivalent cut-off, are 768 million tonnes grading 0.35% Cu, 0.020% Mo, 0.25 g/t Au and 1.41 g/t Ag. The measured and indicated open pit resource is estimated to be 717.8 million tonnes at a grade of 0.30% Cu, 0.020% Mo, 0.22 g/t Au and 1.8 g/t Ag. The deposit occurs in volcanic rocks adjacent to the same Triassic batholith with which the Galore Creek deposit is associated, though not with an alkalic phase. However, the deposit shares some characteristics with the Galore Creek copper-gold deposits that are unusual among porphyry deposits; copper grade contours are sub-horizontal and quartz is largely absent as a stockwork mineral. Another attribute of the Schaft Creek is that the order of abundance of ore minerals is chalcopyrite, pyrite, bornite, molybdenite. This is both significant and unusual. In most porphyry copper deposits pyrite is much more abundant than copper minerals contributing to risk of acid rock drainage.

Preparation of a Project Report continued for the **Davidson** molybdenum project located 10 km west of Smithers. The proponent, Blue Pearl Mining Limited is a wholly-owned subsidiary of Thompson Creek Metals Company. The company proposes to develop an underground mine at Davidson and ship the molybdenum ore to Endako, which it operates, for processing. This development is linked with the proposed new mill at Endako (described above) which would have a separate circuit to treat Davidson ore. Plans were cancelled to drill a pilot hole for a new adit near the base of Hudson Bay Mountain at 700 m elevation.

The Davidson molybdenum deposit (MINFILE 093L 110) contains a resource of 75.3 million tonnes grading 0.177% molybdenum. The Davidson deposit is related to a small intrusion of quartz porphyry, interpreted as the offshoot of a granite stock in the core of Hudson Bay Mountain. The principal molybdenum ore zone (Figure 1.17) occurs 300 m above the quartz porphyry plug in an older, unrelated intrusion that is both silicified and texturally transformed into a spotted ('appaloosa') rock. Exploration drilling was completed in early 2007 to define better a lower mineralized zone at the top of quartz porphyry plug. Results have not been announced.

Activity resumed on the **Morrison** copper-gold project after a one year hiatus. Pacific Booker Minerals Inc completed geotechnical drilling to assess tailings impoundment sites, metallurgical and engineering work, all related to a feasibility study expected to be complete by year-end. The Project Report for a 30 000 tonnes per day open pit mine is expected in mid-2008. Morrison (MINFILE 093M 007) is a porphyry copper deposit with a measured plus indicated resource of 206 869 000 tonnes grading 0.39% Cu, 0.20 g/t Au and 0.005% Mo. Projected metal recoveries are about 86-88% for copper, 60% for gold and 50% for molybdenum (E. Tornquist, pers. comm., 2007).

MINERAL EXPLORATION

PORPHYRY COPPER PROJECTS

Porphyry copper projects comprise copper-gold and copper-molybdenum prospects. Few projects contain economically significant copper, gold and molybdenum. Figure 1.18 shows that most copper-gold deposits are located in the Stikine district and most copper-molybdenum deposits are in the Skeena district. The Stikine district includes Galore Creek, Red Chris and Schaft Creek, and the Skeena district includes Huckleberry mine and Morrison, all of which are described above. Geologically, projects in the Stikine district shown on Figure 1.18 are in Stikine terrane except for Eaglehead which is in a post-accretion intrusion. Skeena district porphyry projects appear to be in Stikine

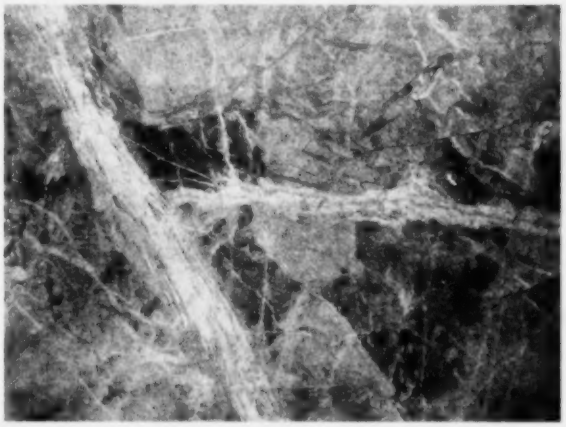

Figure 1.17. Banded molybdenite vein cutting altered and fractured granodiorite in the Davidson deposit.

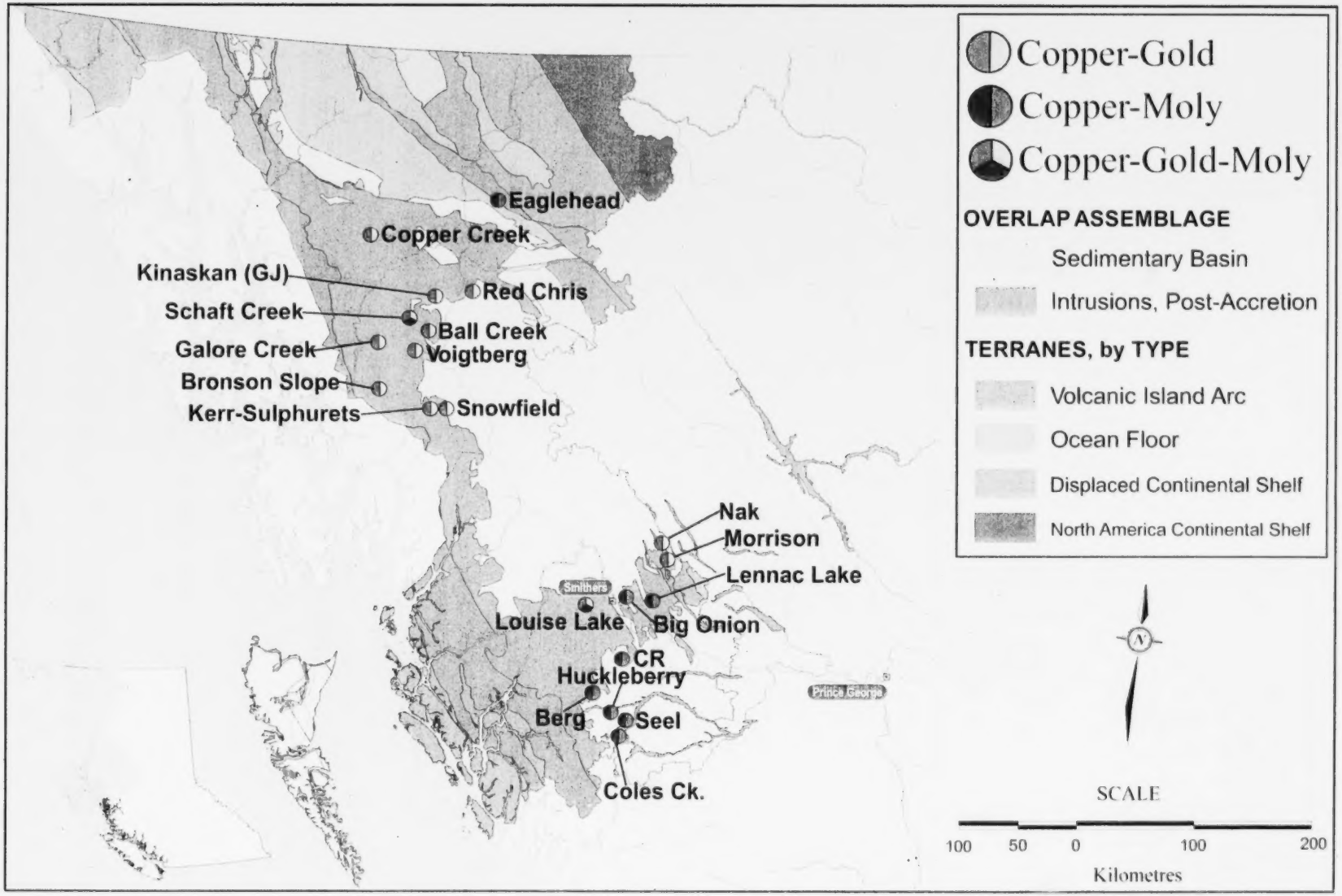

Figure 1.18. Map of porphyry copper projects in Northwest Region.

Terrane but are actually in younger, post-accretion intrusions that are abundant along a transverse geologic feature known as the Skeena Arch. Some of the copper-gold projects in the Stikine district have a high gold to copper ratio, *i.e.* greater than 1 g/t gold for 1% copper. Depending on metal recoveries, especially for gold and relative prices, gold may be more important economically than copper so that some deposits can be referred to as porphyry gold-copper deposits.

The Stikine terrane copper-gold porphyries are generally associated with late Triassic to early Jurassic igneous rocks. These are sub-alkalic, potassium-rich and of intermediate composition, typically monzonite and their volcanic equivalent. K-feldspar porphyritic rocks are common. Alkalic rocks, syenite and pseudoleucite-bearing trachyte that characterize the Galore Creek deposit, represent an end-member composition. The Skeena Arch copper-molybdenum porphyries are generally associated with Cretaceous to Tertiary, calc-alkalic intrusions. These are intermediate to siliceous in composition, typically granodiorite to quartz-feldspar porphyry granite or rhyolite. Mineralization is developed in the intrusion and in adjacent biotite hornfels.

The most significant exploration project in the region is the **Kerr-Sulphurets** project of Seabridge Gold Inc. The site is 40 km north of Stewart and 18 km southeast of Eskay Creek mine (Figure 1.19). Work up to 2006 in the Mitchell zone (MINFILE 104B 176, 275) identified an inferred resource of 564 million tonnes containing 0.72 g/t Au and 0.18% Cu. The district-scale Mitchell and Sulphurets thrust faults are paired flat structures that displaced the top of the Mitchell deposit. The 2007 drill program (15 000 m in 37 holes) was designed to upgrade and expand the resource. Mineralized intercepts yield consistent and uniform gold and copper grade. Although visual copper estimates are difficult, a hand-held XRF analyzer gives a reliable indication of copper grade. Gold correlates closely with copper enabling core loggers to reasonably estimate gold grade in the field (Figure 1.20, M. Savell, pers. comm., 2007). Seabridge is confident of a substantial increase to a new resource estimate, scheduled for early 2008, to initiate a preliminary economic assessment and to declare the project will enter Environmental Assessment. Two historic resources, the **Kerr** copper-gold deposit (MINFILE 104B 191) and the **Sulphurets** gold deposit (MINFILE 104B 182), will be reviewed to bring them into compliance with NI 43-101 so they can be included in the preliminary assessment.

Silver Standard Resources Inc continued to explore the **Snowfields** gold prospect (MINFILE 104B 179), the southeasterly continuation of the Mitchell zone. Further east, the zone is cut off by a north-south fault. Gold is associated with pyrite and molybdenite in a quartz stockwork. Like the Mitchell zone on the Kerr-Sulphurets property, ore-related alteration is overprinted by a strong foliation so that identity of the progenitor, whether volcanic or intrusive, is difficult. Core drilling at

Figure 1.19. Mike Savell on the Mitchell copper-gold zone, Kerr-Sulphurets property.

Figure 1.20. Portable XRF analyzer gives immediate indication of copper, and by inference the gold grade of Mitchell zone drill core.

Snowfield amounted to 8500 m and included some step-out holes. Work in 2006 led to a measured plus indicated resource estimate of 49.4 million tonnes at a grade of 1.48 g/t Au and 0.012% Mo above a cut-off of 0.05 g/t Au. This occurs in a flat, near-surface zone. The inferred resource was 14.7 million tonnes at a slightly lower grade.

Canadian Gold Hunter Corporation continued to

delineate the Donnelly copper-gold zone (MINFILE 104G 086) on the **GJ** property located 25 km southwest of Iskut. Eighty holes totaling 15 800 m were drilled. A small amount of work was done in the North zone (5 holes) and the GJ zone (1 hole). The Donnelly deposit is 1670 m long, 700 m wide and has been intersected 600 m below surface. It trends east-west across a grass-covered alpine plateau (Figure 1.21) at an elevation of 1650 m, almost wholly covered by a thin veneer of till. Donnelly mineralization is zoned south to north from a pyrite-rich margin to a chalcopyrite-dominant core (D. Mehner and J. Bellamy, pers. comm., 2007). The core is truncated by a post-mineral, 65° dipping fault. K-feldspar and magnetite are closely associated with copper mineralization. The North Donnelly zone parallels the Donnelly zone but the two are separated by a 50-200 m distance of non-mineralized rock. North Donnelly is lower grade and pyrite is far more abundant than chalcopyrite but the gold to copper ratio is higher. Sericite is the dominant alteration mineral. Prior to the 2007 program, the Donnelly indicated resource stood at 172.15 million tonnes grading 0.274% Cu and 0.312 g/t Au, at a cut-off of 0.15% Cu. The North Donnelly zone contains an inferred resource of 22.67 million tonnes grading 0.245% Cu and 0.362 g/t Au, also at a 0.15% Cu cut-off.

The **Bronson Slope** gold-copper project was the subject of a 4000 m drilling program by Skyline Gold Corporation. The Red Bluff zone (MINFILE 104B 077) was estimated, prior to the 2007 program, to contain a measured plus indicated resource of 129.8 million tonnes at a grade of 0.44 g/t Au and 0.16% Cu. The inferred resource is 45.2 million tonnes at similar grade. The Red Bluff stock is a megacrystic K-feldspar porphyry of granodiorite to monzonite composition. A quartz-magnetite breccia and an intense sheeted vein stockwork of quartz, specularite and chalcopyrite occurs near the contact of the stock with chlorite phyllite country rocks.

A private company, Paget Resources Corporation continued to explore the **Ball Creek** porphyry copper prospect 10 km west of Highway 37, north of Bob Quinn. Drilling (Figure 1.22) focused in a 250 m wide mineralized zone that could be 1500 m long if further drilling substantiates an interpretation based on geologic mapping, IP and magnetics that the Mary (MINFILE 104G 018) and DM zones are linked. A quartz-pyrite-chalcopyrite stockwork is associated with a monzonite stock (J. Bradford, pers. comm., 2007). Fifteen holes (2900 m) were completed. Bradford states that BC07-12 intersected, from the top of the hole, 231 m that assayed 0.208% Cu, 0.535 g /t Au and 0.005% Mo. Associated minerals include biotite, magnetite and sericite. This is a substantial intersection that may lead to definition of a gold-copper resource.

Paget Resources tested three other porphyry targets between Ball Creek and Schaft Creek. Five holes (1016 m) were drilled at **North More** (MINFILE 104G 120), three holes (662 m) at **Mess Creek** (MINFILE 104G 040) and two holes (459 m) on **Schaft North,** 3 km north of

Figure 1.21. GJ camp on alpine plateau west of Kinaskan Lake.

Figure 1.22. Henry Marsden, Ball Creek project manager, reviews historic core at Ball Creek with Dave Lefebure (BCGS) and Agatha Soful (geology student).

Schaft Creek. At North More, dikes of megacrystic orthoclase porphyry syenite intrude limy volcaniclastic rocks of the Stuhini Group, resulting in copper-bearing skarn. At Mess Creek, chalcopyrite and hematite occur with pink iron carbonate alteration in a 300-600 m wide monzonite.

At **Copper Creek**, Firesteel Resources Inc reclaimed trenches that were excavated in 2006 and drilled four core holes in the DK zone (MINFILE 104J 035). The DK zone includes a 20-60 m thick supergene enrichment blanket. Hole 2007-2 obtained the best intersection of the program: 18.25 m from surface that graded 0.71% Cu and 0.22 g/t Au in the supergene zone followed by 33.75 m grading 0.45% Cu and 0.29 g/t Au. Geology of the property is described in recent issues of *Exploration and Mining in BC*.

BC Gold Corporation conducted airborne geophysics, infill soil geochemistry and drilled four holes on the **Voigtberg** property (MINFILE 104G 146) located 20 km northwest of Bob Quinn. The program followed up on a

2006 drill intersection of 51.1 m containing 1.03 g/t Au. The intercept and overlying gold soil anomaly are thought to represent a gold-rich halo peripheral to a porphyry copper-molybdenum system. Rocks containing pseudoleucite, indicative of an alkalic igneous system, were intersected by the 2007 drilling.

On the adjoining **Grizzly** property, Rimfire Minerals Corporation explored an alkalic copper-gold system (MINFILE 104G 079). Syenite dikes and sills intrude mafic volcanic and clastic sedimentary rocks and are attended by intense potassic alteration (orthoclase and biotite). Quartz is notably absent, as it is at Galore Creek. A 38 m chip sample returned 0.73% Cu and 1.1 g/t Au. More work is planned in 2008 on this promising target.

The **Eaglehead** porphyry copper prospect (MINFILE 104I 008) 50 km east of Dease Lake was drilled by Carmax Explorations Ltd. Mineralization is developed in a pink, biotite-hornblende granodiorite for a 10 km distance of its faulted contact. The Thibert fault is a regional-scale terrane-bounding structure. Twelve holes (4100 m) were completed, testing IP anomalies along the projected southeast trend of the copper-molybdenum zone. Chalcopyrite and molybdenite fracture fillings have up to metre-wide K-feldspar alteration envelopes. Carmax reported 0.257% Cu, 0.009% Mo and 0.059 g/t Au over a 334.4 m core length in its second hole of the program. Results from 10 holes remain to be reported.

The long-dormant **Berg** porphyry copper-molybdenum prospect (MINFILE 093E 046) was reactivated by Terrane Metals Corporation. The property is 84 km southwest of Houston and 22 km northwest of Huckleberry mine in the richly mineralized Tahtsa district. Mineralization occurs in a composite quartz monzonite stock as an annular zone around a barren core (Figure 1.23). A major drilling program (11 300 m in 29 holes) will bring the historic resource estimate of 238 million tonnes grading 0.40% Cu and 0.031% Mo into compliance with current standards. An interesting feature of the deposit is a 70-150 m thick supergene zone in which copper is present as chalcocite and covellite. This is capped by a 10-40 m thick leached zone in which copper is depleted but molybdenum is preserved as the yellow oxide, ferromolybdite.

Definition drilling continued at the **Big Onion** porphyry copper prospect (MINFILE 093L 124) by Eagle Peak Resources, a private company. The property is 16 km east of Smithers. Mineralization is developed in composite quartz diorite and quartz-feldspar porphyry intrusions. A major core drilling program was done, comprised of 62 holes totaling more than 16 600 m. No results have been disclosed but Lloyd Tattersall, director and Chief Operating Officer of Eagle Peak, states that the historic resource of 94 million tonnes grading 0.42% copper is expected to be increased in size and grade (pers. comm., 2007).

North American Gem Inc conducted another winter drilling campaign at the **Louise Lake** porphyry prospect

Figure 1.23. Berg porphyry copper-molybdenum deposit, the barren core of the deposit underlies the low ridge in the middle distance.

(MINFILE 093L 079) west of Smithers. Twenty holes (more than 6200 m) were completed that led to a revised resource estimate of 26 million tonnes (indicated) at 0.231% Cu, 0.008% Mo and 0.22 g/t Au and 125 million tonnes (inferred) at 0.239% Cu, 0.008% Mo and 0.23 g/t Au. The Louise Lake deposit has an unusual mineralogy – copper occurs as fine grained chalcopyrite and enargite – and unusual geometry, occurring as a 170 m thick, gently-dipping tabular body. Metallurgical study is on-going and further drilling is scheduled in early 2008.

At the **Seel** (MINFILE 093E 105) and adjoining **Ox Lake** (MINFILE 093E 004) porphyry prospects, Gold Reach Resources Ltd completed winter and summer drilling that totaled 9373 m in 38 holes. An additional 88 km of IP surveying was also completed, to guide the drilling. The properties are 110 km south of Houston, and just 7 km from Huckleberry copper mine. New resource estimates for both deposits are expected in early 2008. Ox Lake is a copper-molybdenum system and Seel, unusual for the Tahtsa district, is a copper-gold system.

Callinan Mines Limited continued its exploration of the **Coles Creek** porphyry copper prospect (MINFILE 093E 042) with a 2650 metre drilling program. The property is underlain by a Cretaceous-aged Bulkley granodiorite stock, typical of the Tahtsa district, and hornfelsed volcanic rocks. The hornfels is strongly fractured and healed by gypsum. Results of drilling were not available.

The **Lennac Lake** porphyry copper property (MINFILE 093L 190, 191) 45 km east of Smithers was acquired by Dentonia Resources Ltd with the aim of testing a target that had been trenched but never drilled. The Southeast zone lies 1-2 km from two mineralized zones previously explored by drilling. Fracture-controlled molybdenite in quartz porphyry and a chalcopyrite-bearing intrusive breccia were discovered in the Southeast zone by prospector Pat Suratt in 1991. The first phase of drilling used a light, hand-portable drill that achieved 30

to 110 m deep holes (Figure 1.24). These intersected fine grained, silica-clay altered intrusive rocks with patchy disseminations of fine grained pyrite-chalcopyrite. Core analyses revealed significant enrichment in silver, *e.g.* 2777 ppb Ag over a 37.7 m interval. The Southeast zone is interpreted to be a porphyry copper-molybdenum system exposed at a relatively high level (D. MacIntyre, pers. comm., 2007). A second drilling program is on-going.

The **CR** porphyry copper-molybdenum property (MINFILE 093L 007) was drilled by Manson Creek Resources Ltd in a 7-hole (2000 m) program. The best hole in the 'South Porphyry' zone (07CR-14) intersected 0.447% Cu and 0.014% Mo over an interval of 94.5 m. However, drillholes 300-500 m west of this hole indicate the mineralized intrusions, fine grained felsic porphyry and a crowded feldspar-quartz-biotite porphyry, narrow and terminate to the west.

The **Nak** (MINFILE 093M 010) and nearby **Dorothy** (MINFILE 093M 009) porphyry copper prospects in the Babine district, 85 km northeast of Smithers, were acquired by Copper Ridge Explorations Inc. Porphyry copper mineralization in the district is associated with a distinctive biotite-feldspar porphyry of granodiorite composition and early Tertiary age. Copper Ridge worked late in the year to complete an 85 km IP survey, with intent to drill in 2008.

Eastfield Resources Ltd was encouraged by its discovery of a new area of porphyry mineralization on the **Zymo** property (MINFILE 093L 324) northwest of Smithers.

Figure 1.24. Gary Thompson's unimog used in first phase of drilling at Lennac Lake.

PORPHYRY MOLYBDENUM PROJECTS

Porphyry molybdenum projects are displayed on Figure 1.25. Molybdenum prospects occur in Cretaceous to Tertiary age intrusions in Northwest BC. These intrusions post-date terrane accretion and therefore molybdenum prospects may be present anywhere in the region. However, there is a marked concentration in the Skeena Arch. Molybdenum mineralization found in granite batholiths is preferentially associated with a fine-grained border or high-level phase. Examples are Endako mine, Ruby Creek, Storie and the new Shan prospect. Molybdenum mineralization is also associated with small, highly silicic intrusions where it typically occurs in a quartz stockwork above the intrusion or as a vertical annular zone around it. Examples include the Davidson, Lucky Ship, Red Bird and Alice Arm deposits including Ajax. Endako, Ruby Creek and Davidson are described in previous sections of this report.

Columbia Yukon Resources Inc continued to drill the **Storie** deposit (MINFILE 104P 069) near Cassiar to upgrade the molybdenum resource. A major drilling program was conducted, 23 000 m in 76 holes (Figure 1.26). From work in 2006, an inferred resource was calculated of 101.59 million tonnes containing 0.067% Mo, at a cut-off of 0.035% Mo, a maximum open-pit depth of 325 m and a 1.5:1 stripping ratio. Mineralization is near the border of the Cassiar batholith and forms a flat, 150-200 metre thick zone. Columbia Yukon signed an agreement with the Dease River Indian band that extends through the anticipated two-year exploration phase of the project. In an interesting study to evaluate loss of molybdenite in the core-sawing process twin holes were drilled, with core from one hole being sawn in the usual manner and one-half assayed, while whole-core was assayed from the second hole. The sawn core returned 0.093% MoS_2 from 27 to 114 m (an interval of 87 m). The whole-core returned 0.125% MoS_2 from 23 to 101 m (an interval of 78 m), roughly 30% higher molybdenum grade over a 10% shorter interval. This suggests that cutting the core results in both a loss of molybdenite and a 'smearing' of the soft mineral down the core length.

Drilling by Tenajon Resources Corporation on the **Ajax** prospect (MINFILE 103P 223) promises to yield a significant upgrade to the molybdenum resource. Ajax is 14 km north of Alice Arm on the north coast. Prior to 2007, the most recent geological work on the property occurred in 1967. Based on geological mapping, A. Takeha recommended a drilling orientation of 315°, instead of 235° as was being drilled at the time, so as to cross mineralized structures and dike-shaped intrusions (R. L'Heureux, pers. comm., 2007). This recommendation was enacted in 2007 and resulted in well-mineralized intercepts from the twelve-hole, 2300 m program (Figure 1.27). For example 2007-3, the westernmost hole drilled to date on the deposit, intersected 0.091% Mo over 236.2 m including a higher grade interval of 0.126% Mo over 109.5 m. Inferred resources stood at 448.8 million tonnes grading 0.063% Mo prior to the 2007 program.

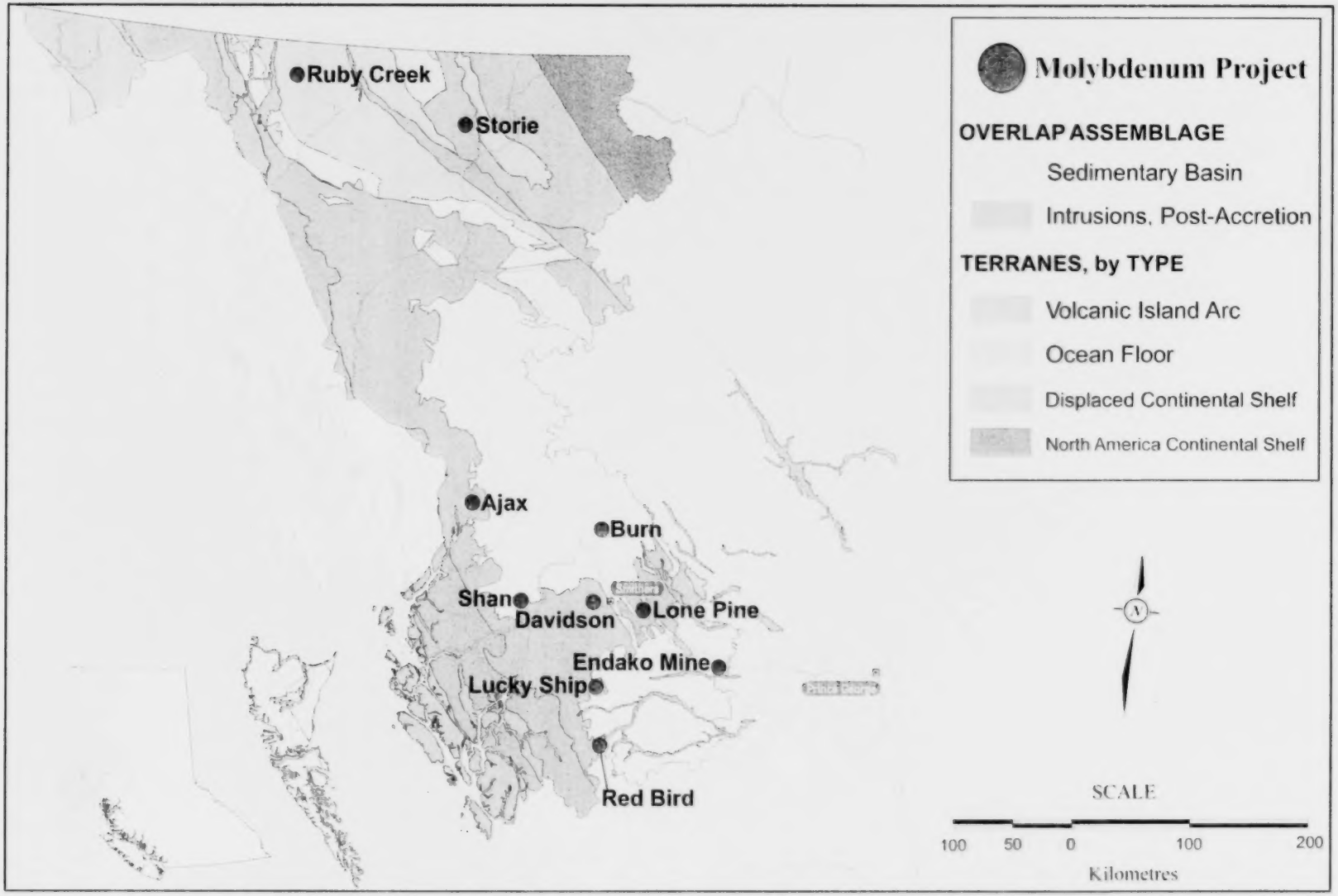

Figure 1.25. Map of molybdenum projects in Northwest Region.

Figure 1.26. Storie molybdenum deposit.

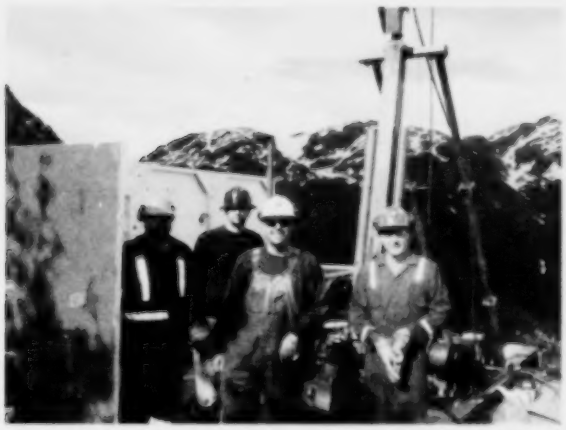

Figure 1.27. Diamond drilling crew on the Ajax molybdenum project.

BCM Resources Ltd continued to explore the **Shan** property (MINFILE 103I 114) 20 km northeast of Terrace. An airborne magnetic survey and more than 9200 m of drilling were completed. Core intersections in the Las Margaritas zone are up to 0.107% Mo over 112.7 m (in LM007) and 0.103% Mo over 190 m (in LM027) with a higher grade intercept further down the hole of 0.152% Mo over 17.3 m. This latter hole contained a purple mineral tentatively identified as fluorite. No resource estimate has been calculated yet, but mineralization is interpreted to occur in gently dipping bodies fed by steeply dipping feeder zones. The largest of these, based on drilling to mid-August, was estimated to be 150 m by 350 m in plan and up to 50-60 m thick. Fine-grained granite is the preferred hostrock, which is underlain by coarse biotite granite. Hazelton Group volcanic rocks overlie the mineralized granite. An unusual feature of the Shan deposit is significant chalcopyrite; 1.7% Cu in one remarkable 3 m core sample. However, copper and molybdenum are not directly correlated. Molybdenum mineralization is thought to be controlled by a northeast fault that dips 50° southeast and an intersecting series of NNW structures that dip about 70° east (M. Venables, pers. comm., 2007)

New Cantech Ventures Inc completed definition of the molybdenum resource on the **Lucky Ship** project (MINFILE 093L 053) 65 km southwest of Houston. Fifty holes totaling more than 15 000 m were drilled and the focus of work shifted to geotechnical, engineering and environmental studies required for feasibility analysis and regulatory approval of mine development. A preliminary economic assessment was done for a 10 000 tonnes per day open pit mine based on an open pit resource of 55 million tonnes grading 0.062% Mo. The indicated resource is 52.6 million tonnes at 0.071% Mo, plus an inferred resource of 8.3 million tonnes grading 0.070% Mo.

The **Lone Pine** project 35 km south of Smithers was explored by Bard Ventures Ltd (Figure 1.28). Four molybdenum zones are identified on the property: Alaskite, Mineral Hill, Quartz Breccia and Granby (MINFILE 093L 027, 028). These were covered by a 38 km three-dimensional IP survey. A first phase drill program returned 0.054% Mo over 231.4 m in the Quartz Breccia zone. The on-going second phase program is focused in the Alaskite zone. Quartz-feldspar-biotite microporphyry and adjacent hornfels are cut by a quartz stockwork that contains pyrrhotite, pyrite and molybdenite.

Tenajon Resources Corporation performed a 23 km IP and magnetic survey on the **Burn** property (MINFILE 093M 147) and drilled five holes totaling 1500 m (Figure 1.29). The property is located near Kispiox, 14 km north of Hazelton. A quartz-molybdenite stockwork occurs in bleached and fractured biotite hornfels and in dark biotite-feldspar porphyry, similar in composition to copper-bearing intrusions in the Babine district. Results were not available at time of writing but follow-up drilling is being considered.

Figure 1.28. Lone Pine molybdenum property, viewed from Highway 16.

Figure 1.29. Aligning the drill at the Burn molybdenum project.

Torch River Resources Ltd completed ten core holes (2645 m) on the **Red Bird** molybdenum prospect located 125 km south of Houston (MINFILE 093E 026). Based on work until the end of the 2006 season, the indicated resource is estimated to be 43.3 million tonnes at a grade of 0.064% Mo. An additional 70.5 million tonnes is inferred grading 0.058% Mo. The resources are distributed in three zones, Main, Southwest and Southeast, which lie around the margin of a quartz monzonite stock. Torch River investigated the rhenium content of the deposit by selective sampling of drill core. RB-06-132 contains 128 ppb (0.128 g/t) Re and 0.137% Mo over 116 m.

POLYMETALLIC MASSIVE SULPHIDE PROJECTS

Polymetallic massive sulphide projects are shown in Figure 1.30. These are all volcanic-hosted; sediment-hosted massive sulphide deposits occur in strata of the North American continental shelf and are not well represented in Northwest region. Volcanic hosted deposits are found primarily in Triassic and Jurassic volcanic rocks of Stikine terrane and in its Paleozoic basement. Eskay Creek mine is an example of the former; Tulsequah Chief is representative of the latter. Eskay Creek mine, Tulsequah Chief and Kutcho Creek projects are described in previous sections of this report.

Spirit Bear Minerals Ltd discovered copper-bearing massive sulphide on the **Iskut** project at Johnny Mountain while exploring for gold. Stratiform massive sulphide mineralization was known to occur on the property at the SMC showing (MINFILE 104B 264, Figure 1.31) but two 700-metre holes were drilled at a perpendicular orientation to all previous holes to test the gold-bearing Zephrin zone far below the workings of the Johnny Mountain mine. The target was the transition of deformation from brittle to ductile with the attendant possibility of intersecting a 'Snip-type' vein containing high gold grade (G. Richards and P. Metcalfe, pers. comm., 2007). Drillhole SB-07-03 intersected stratiform massive and semi-massive pyrrhotite, pyrite, magnetite and chalcopyrite over widths of 1.2, 14.3, 2.1 and 1.4 m over a 105 m core interval. Most of the interval consists of mafic volcanic tuff and/or flow rock, metamorphosed to chlorite-grade and altered with epidote and biotite, but a 3 m thick rhyolite horizon occurs near the top. A total of 3000 m was drilled in 5 holes. Mobile metal ion geochemistry is reported to be effective in target selection.

Kenrich-Eskay Mining Corporation continued to explore the **Corey** property (MINFILE 104B 240, 387) for an Eskay Creek-type deposit. Corey is located 12 km south of Eskay Creek mine and covers directly correlative stratigraphy. Twenty-one drillholes recovered more than 5700 m of core and tested geologic targets and anomalies from an airborne EM survey. Drillhole RL-2 intersected 1.6 g/t Au, 352 g/t Ag, 0.43% Cu and 1.86% Zn over 0.5 m.

Kenrich-Eskay Mining Corporation alsocontinued its exploration in the Anyox district on the **Coastal Copper** project. Work focused on the **Double Ed** deposit (MINFILE 103P 025) with the drilling of 7 holes (2580 m). Double Ed comprises vertically dipping lenses of massive pyrite, pyrrhotite and chalcopyrite and contains a resource of 1.85 million tonnes grading 1.6% Cu and 1.0% Zn. The deposit occurs near the top of a pillow basalt sequence several hundred metres below a thick accumulation of argillite. Kenrich-Eskay struck an agreement with Teck Cominco Metals Ltd to purchase certain historical data pertaining to the Coastal Copper project.

Also in the Anyox copper-massive sulphide district, SNL Enterprises Ltd explored the **Copper Pendant** property. The property adjoins both the Crown-granted claims at the core of the district and claims comprising the Coastal Copper project. Targets from an airborne EM and magnetic survey flown in 2006 were tested by drilling (1164 m in 4 holes) in 2007.

Bell Resources Corporation is contemplating a 1000-metre underground drift at the **Granduc** deposit (MINFILE 104B 021) to position exploration drilling. Engineering and other planning activities were carried out but development was deferred until 2008. Granduc is a volcanogenic massive sulphide deposit with a total mineral inventory of 29.03 million tonnes grading 1.83% Cu, which includes 15.4 million tonnes of production (Bell Resources website). The copper deposit is part of a sulphide facies banded iron formation that occurs near the contact between mafic pillow lava and tuff with overlying chert, argillite and tuff.

Barbara Anne (or **BA**) is a project (MINFILE 104A 178) of Mountain Boy Minerals Ltd located south of Bear Pass and 30 km from Stewart (Figure 1.32). A recently recognized sequence of well-bedded iron-rich mudstone, chert and jasper is associated with spheroidal rhyolite.

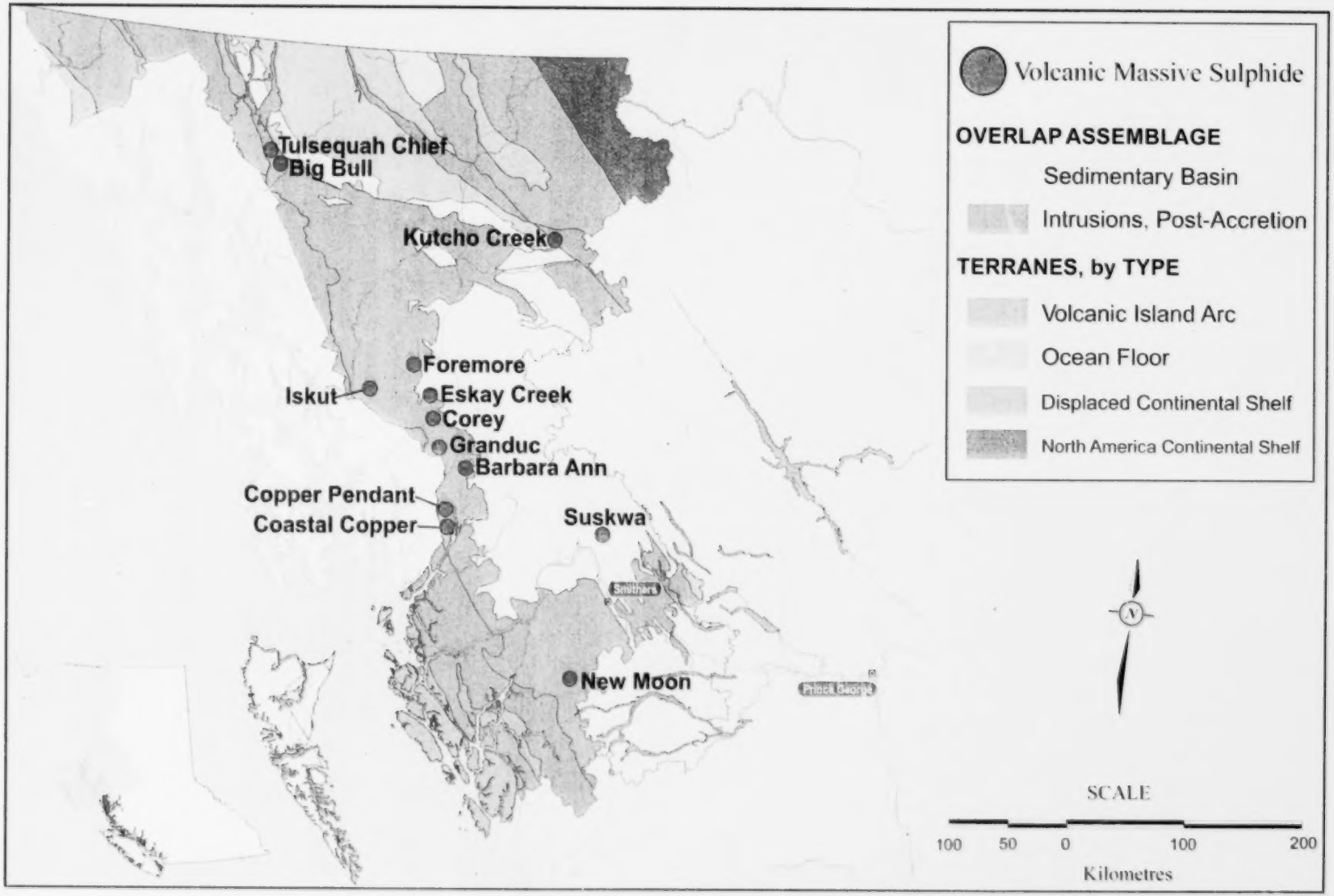

Figure 1.30. Map of volcanic massive sulphide projects in Northwest Region.

Figure 1.31. Iskut property; Gord Richards, project manager, shows a VMS occurrence to geologists from BC Geological Survey.

Figure 1.32. Drilling near the Bear Glacier on the Barbara Anne (BA) property.

Stratigraphy is thought to correlate with the ore horizon at Eskay Creek. Drilling was done on a 20 m grid and totaled 4245 m in 31 holes. Highlights include an intersection of 29.0 m that graded 203.5 g/t Ag, 2.5% Pb and 1.0% Zn. Drillhole orientation and an estimate of true thickness are not stated. Mineralization is described as being associated with replacement-style barite and hematite alteration.

Amarc Resources Ltd conducted a major exploration project of the Sitlika volcanic belt, prompted by its work on the Bodine project in North-Central region. The belt continues into Northwest region, north of Burns Lake, where the company explored felsic volcanic rocks on the **Megamine** property (MINFILE 093K 052).

The **New Moon** project (MINFILE 093E 011) is shown in Figure 1.30 but is not a volcanic massive sulphide. A volcanogenic model has been considered at New Moon but polymetallic mineralization, including the source of glacial boulders, is thought to be veins and skarn. New Moon is near Morice Lake, 100 km south of Smithers. Anglo Columbia Mines Inc conducted an airborne EM and magnetic survey, heavy mineral silt geochemistry and geological mapping as part of its reappraisal of historic work. The property is underlain by diverse volcanic and sedimentary rocks belonging to the Telkwa Formation that are intruded by steep, northeasterly granite dikes and younger monzonite sills (R. Therriault and A. Ross, pers. comm., 2007). Skarn formation, including development of actinolite, magnetite, garnet, epidote, pyrite and chalcopyrite, is associated with the granite dikes (Figure 1.33).

GOLD – SILVER PROJECTS

The gold-silver projects shown in Figure 1.34 comprise epithermal to mesothermal veins, orogenic and intrusion-related veins. Gold-silver projects occur in various geologic terranes but are concentrated in the 'Golden Triangle' (or Stewart district) of Stikine terrane. There is a secondary cluster in the Atlin area where they occur in Cache Creek terrane and in the terrane-bounding Llewellyn fault. Projects described below proceed roughly from north to south.

Yellow Jacket (MINFILE 104N 043) contains coarse gold mineralization related to the tectonic emplacement of ultramafic rocks of the oceanic Cache Creek terrane. Rich placer gold overlies the property, in the heart of the Atlin

Figure 1.33. Geologists examine skarn horizons on the New Moon property.

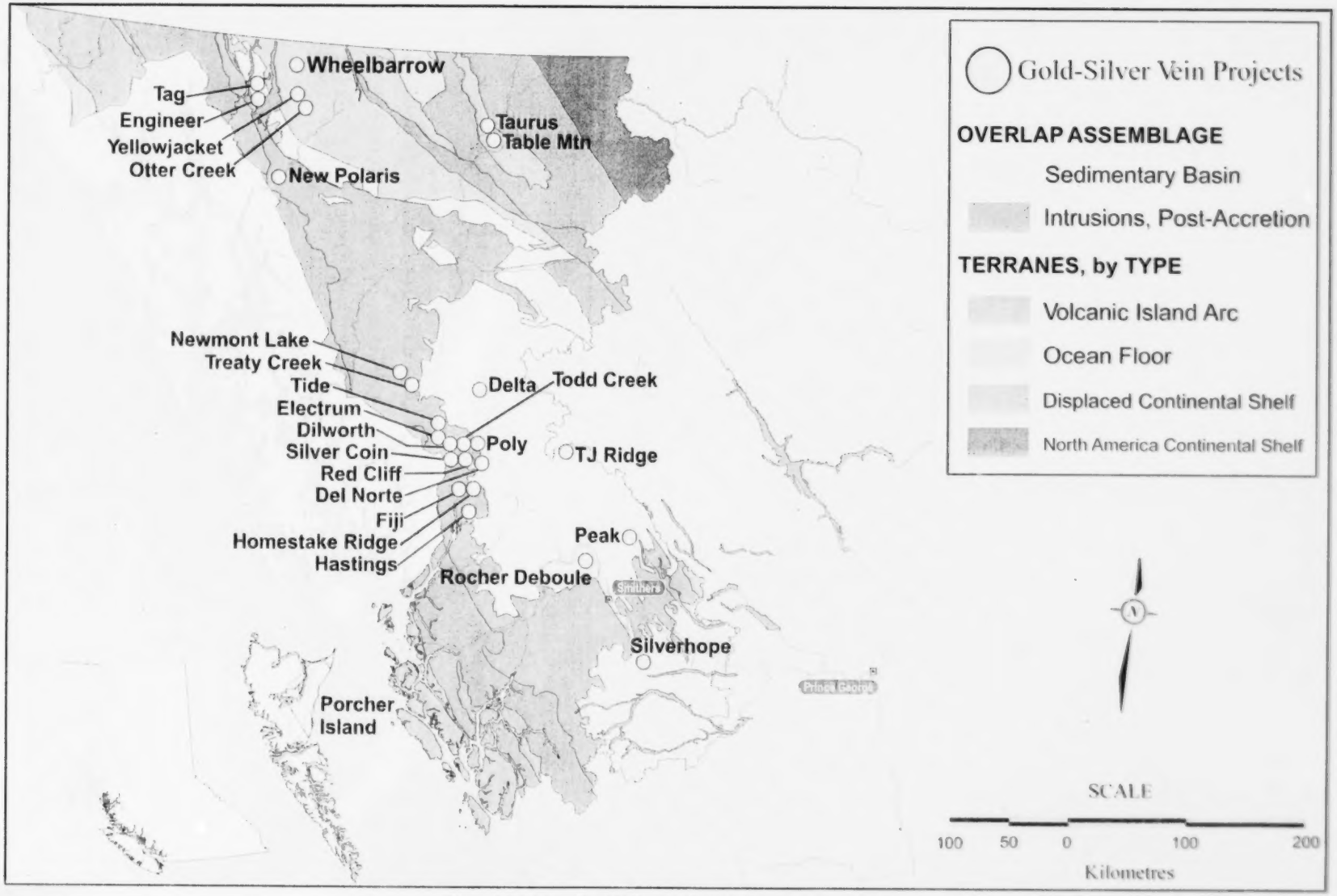

Figure 1.34. Map of gold-silver projects in Northwest Region.

placer district. Prize Mining Corporation excavated a 10 000 tonne bulk sample and built a state-of-the-art Knelson-designed gravity processing plant (Figure 1.35). Mining was done on three benches in blocks measuring 6 m square by 2.5 m deep (L. Dandy, pers. comm., 2007). Each block was channel sampled to enable close correlation with gold recovery from the plant. Abundant talc and serpentine resulted in poor crushing characteristics so that most of the material remains to be treated in 2008. Stockpiled gravel from above the test pit was sluiced and 206 oz of gold was recovered from the first shipment of heavy mineral concentrate.

Saturn Minerals Inc explored the **Wheelbarrow** property (MINFILE 104N 122) near the closed Atlin Ruffner mine northeast of Atlin. Silver mineralization occurs in a series of shear-veins within coarse-grained granite: the Big Canyon North, Big Canyon South (Figure 1.36), Vulcan, Brenda, Wheelbarrow, Wallis, Al and Wolf zones. In some zones, quartz veins have diffuse boundaries and are believed to be late magmatic (K. Mastarlaz, pers. comm., 2007). Geologic mapping and excavator trenching were followed up by drilling nine short core holes. Trenching in the Big Canyon zone returned up to 356 g/t Ag, 0.66% Pb and 0.27% Zn across 2.7 m. Saturn Minerals conducted preliminary work on several other properties in the Atlin area including **McKee Creek**, where it reported discovery of gold-bearing quartz veins below placer gold workings.

On **Otter Creek**, also in the Atlin placer district, Blind Creek Resources followed the Yellow Jacket exploration model and drilled four holes to test bedrock below gold-bearing gravel. One occurrence of visible gold was recorded, in a quartz vein cutting strata of the oceanic Cache Creek terrane: argillite, chert and serpentine (G. Payie, pers. comm., 2007).

CZM Capital Corp drilled 26 core holes (4650 m) to test epithermal gold-silver mineralization on the **Tag** property (MINFILE 104M 079, 080) located on the Taku Arm of Tagish Lake 35 km west of Atlin. The 025 fault is a northeast splay off the regional-scale Llewellyn fault. Banded and vuggy quartz with sparse pyrite fill open space in a fault breccia of Laberge Group greywacke (Figure 1.37). Soil geochemical and airborne magnetic surveys were conducted to detect new mineralized areas. The highlight of the first phase of drilling is an interval from TAG07-29 that graded 1.3 g/t Au and 5.9 g/t Ag over 35.0 m.

The historic **Engineer** mine (MINFILE 104M 014) is another epithermal gold system on the shore of Taku Arm that is located on a splay of the Llewellyn fault. BC Gold worked to rehabilitate underground workings to enable more advanced exploration, including drilling in 2008.

The **New Polaris** gold project (MINFILE 104K 003) is centred on the past producing Polaris mine. Gold is controlled by structures related to the Llewellyn fault, at elevations 700-1000 m lower than at Engineer and Tag. Mineralization is more mesothermal in character. Gold is

Figure 1.35. Pilot plant to recover gold on the Yellow Jacket (YJ) property.

Figure 1.36. Silver-bearing fault zone in the Big Canyon zone on the Wheelbarrow property.

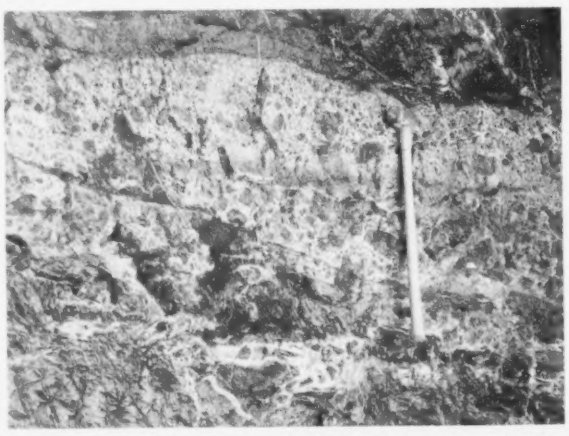

Figure 1.37. Epithermal quartz heals a fault breccia on the Tag property.

locked in arsenopyrite. Canarc Resource Corp reported a measured plus indicated undiluted resource of 1.67 million tonnes grading 10.62 g/t Au and an inferred resource 2.06 million tonnes grading 10.5 g/t Au. Both are at a 2 g/t cut-off grade. A preliminary assessment was made to build a mine to produce 80 000 oz of gold per year. Development cost is projected to be C$90.5 million and cash cost at US$327 per oz. The company is considering an underground development program to recover a bulk sample to test recovery of the refractory gold.

Cusac Gold Mines Ltd continued the **Taurus** project (MINFILE 104P 010, 011), expansion of a bulk-tonnage gold zone on its mineral property near Cassiar. Drilling (2600 m in 15 holes) returned up to 1.25 g/t Au over 79.9 m and 27.9 g/t Au over 5.5 m. Gold occurs in quartz veins and adjacent carbonate-altered mafic volcanic rocks where it is associated with coarse pyrite and arsenopyrite (Figure 1.38). Geologic work advanced the understanding of faulting in the district (L. Hunt, pers. comm., 2007). Bottle-roll cyanide leach tests indicate high gold recovery in the 88-Hill zone but low recovery from the Highway and Taurus West zones. As noted in a preceding section, Cusac Gold merged with Hawthorne Gold Corporation at the end of 2007.

Figure 1.38. Pyritohedrons of pyrite in carbonate-altered basalt, Taurus project.

At **Newmont Lake**, 30 km southeast of Galore Creek, Romios Gold Resources Inc reported discovery of alkalic porphyry-style copper-gold mineralization. The RNT zone was found by geologic mapping and occurs in syenite dikes of the Forrest-Kerr pluton. Early in the year, calculation of an inferred resource was announced in the Northwest zone (MINFILE 104B 281) of 1 406 000 tonnes grading 4.43 g/t Au, 0.22% Cu and 6.4 g/t Ag, at a cut-off grade of 2 g/t Au equivalent. Many gold and copper veins and skarn zones occur on the Newmont Lake property, related to the northeasterly McClymont and Newmont fault zones that cut Paleozoic Stikine assemblage, including limestone, and intrusive rocks of various ages.

Romios Gold Resources Inc was active on the **Jack Wilson**, **Trek** and **Royce/Porc** properties near Galore Creek. Drillhole JW07-06 on the Jack Wilson project (MINFILE 104G 021) intersected a 2.4 m interval that returned 31.87 g/t Au in a quartz-carbonate vein zone. The hole tested below the Boundary zone vein, a high-grade gold showing found in 1988. Two other holes in the program explored a soil geochemical anomaly.

American Creek Resources Ltd reactivated exploration on the **Treaty Creek** gold property 25 km southwest of Bell II on Highway 37. Recession of the Treaty glacier enabled discovery of two new showings on opposite sides of the one km-wide glacier (Figure 1.39). The ND discovery is near the Eureka zone (MINFILE 104B 078) on the south side of the glacier, Copper Belle is near the Goat Trail zone (MINFILE 104B 172) on the north side. Six holes were drilled in the Eureka zone, five holes at ND zone, ten at Copper Belle and nine holes were drilled in the GR2 zone, one km northwest of

Figure 1.39. Drilling the new Copper Belle zone at Treaty Creek; the Eureka and ND zones are visible across the 1 kilometre wide glacier.

Copper Belle, for a total of 5470 m. Significant results were obtained in three zones with many holes yet to be reported at year-end. Intercepts in the Eureka zone include 0.69 g/t Au and 2.89 g/t Ag over 75.45 m and an impressive 0.33 g/t Au, 2094 g/t Ag and 0.38% Cu over 8.5 m with the hole ending in mineralization as the hole was lost in a fault. Highlights from the Copper Belle zone

include 0.93 g/t Au and 8.78 g/t Ag over 76.1 m and 1.32 g/t Au, 5.93 g/t Ag and 0.09% Cu over 30.2 m (Figure 1.40). Interestingly, the Mitchell zone on the Kerr-Sulphurets property lies 10 km to the southwest with the intervening area covered by glaciers. The Mitchell and Sulphurets faults project beneath Treaty glacier.

The **Electrum** property of American Creek Resources Ltd covers the former East Gold mine (MINFILE 104B 033), a small producer of gold from a very rich vein of electrum. The deposit occurs within an extensive quartz-sericite-pyrite alteration zone on the margin of the Summit Lake stock (Figure 1.41). American Creek continued a major, systematic drilling program, 12 500 m in 45 holes.

Exploration on the **Tide** property (MINFILE 104B 129) by American Creek Resources Ltd comprised geological mapping, channel sampling (318 m) and eight core holes (1835 m). Two north-south mineral trends are present that are 2 km long and 500-1000 m apart. The western belt comprises the North Pit, 36 and South Pit zones, each overlain by gold and arsenic soil anomalies. The eastern belt comprises silver, copper, zinc and molybdenum soil anomalies that are localized along the north-striking Arrow fault. Gold content correlates with fracture density and detailed study (R. Black, A. Shannon, pers. comm., 2007) determined that gold occurs with arsenopyrite on steep east-west fractures that are cut by steep north-south fractures. Drilling results were not available.

Ascot Resources Ltd conducted rock trenching (452 lineal m) and drilling (4855 m in 36 holes) on the **Dilworth** property. Perhaps because of fragmented ownership, the area has not been explored in decades despite many historic gold-silver showings including Oxedental (MINFILE 104B 142), Forty-Nine (MINFILE 104B 038), Chicago and Helen. The mineral zone strikes north-northwest and dips steeply west (S. Deanne, pers. comm., 2007). Late in the year Ascot purchased the Old Timer, Butte and Yellowstone (MINFILE 104B 039) Crown grant claims, internal to the Dilworth property. Surface sampling (Figure 1.42) returned up to 9.4 g/t Au and 246 g/t Ag over 6 m in the Central Chicago zone, 5.8 g/t Au and 386 g/t Ag over 4 m in the Hammer zone and 9.8 g/t Au and 1068 g/t Ag over 5 m in the Forty-Nine zone. Drill results were not available.

Pinnacle Mines Ltd continued to drill on the **Silver Coin** property (also known as Silver Butte, MINFILE 104B 150) located 24 km northwest of Stewart. Fifteen holes (2764 m) were completed before the onset of winter conditions forced a halt to work. The property includes the Kansas claim that was acquired from Tenajon Resources Corp. Prior to the 2007 program, MineFill Services calculated an inferred resource of 25.66 million tonnes grading 1.66 g/t Au, 7.49 g/t Ag and 0.28% Zn at a cut-off grade of 0.75 g/t Au.

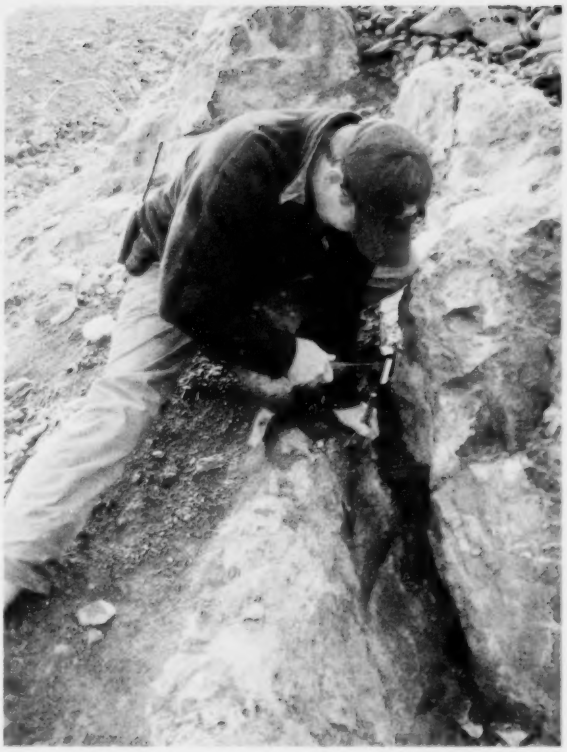

Figure 1.40. Desmond O'Brien, co-discoverer of the Copper Belle and ND showings at Treaty Creek, takes a sample.

Figure 1.41. Susan Deanne and Darrel Garner study an old trench on the Electrum property.

The **Red Cliff** past-producer (MINFILE 104A 037) was explored by Mountain Boy Minerals Ltd which completed 41 drillholes totaling 8570 m. Red Cliff produced 1175 tonnes of copper-gold ore, mainly in 1912, from 2300 m of underground development on five levels. No details of drillhole distribution are available but the company reported an intersection of 15.0 g/t Au and 1.29% Cu over a 3.8 m core length.

Figure 1.42. Rick Kasum surveys sample lay-out on the Dilworth property.

Bravo Venture Group Inc returned to the **Homestake Ridge** gold-silver prospect (MINFILE 103P 216) 35 km southeast of Stewart to complete 9300 m of drilling in 28 holes. The program employed up to four rigs. The focus was on follow-up to drilling in 2006 which identified an inferred resource of 2.3 million tonnes grading 7.53 g/t Au, 31 g/t Ag and 0.27% Cu at a 3 g/t Au cut-off. In addition to the Main Homestake zone, holes were drilled in the Vanguard Gold zone and the Homestake Silver zone. No assay results had been reported at year-end.

Geofine Exploration Consultants Ltd directed three drilling projects in the Stewart district for various clients. These include **Todd Creek** (MINFILE 104A 001 and 005, for Goldeye Explorations Limited and Polar Star Mining Corp), **Poly** (in Bear Pass northeast of Stewart) and **Delta** (MINFILE 104A 165, for Weekes Investment Group).

Teuton Resources carried out exploration drilling on the **Fiji**, **Orion** (MINFILE 104B 201), **Midas** (MINFILE 104A 176) and **Konkin Silver** (MINFILE 103P 250) properties in the Stewart district to test gold and silver targets.

The **TJ Ridge** property (MINFILE 094D 031) of Roxgold Inc comprises a series of veins mineralized with base and precious metals related to a hidden igneous intrusion. A temporary access trail was built to bring an excavator to the property, located 95 km north of Hazelton. Work comprised some 2000 m of trenching, 564 km of airborne EM and magnetic survey, and eighteen core holes totaling 2900 m. Prior exploration intersected narrow dikes but up to 223 m of quartz monzodiorite was intersected in 2007. Veins contain pyrite, pyrrhotite, arsenopyrite, sphalerite, galena and chalcopyrite. No core assays are available but surface samples contain up to 10 g/t Au.

Cross Lake Minerals Ltd completed a major drill program early in 2007 at the past-producing gold mine on **Porcher Island** (MINFILE 103J 017), located 35 km southwest of Prince Rupert. Almost 12 000 m was completed in 39 holes and featured discovery of a new high-grade gold vein. Intersections of the Cedar vein were reported from 10 holes ranging from 7.1 to 27.0 g/t Au over widths of 1.0 to 3.4 m. The Cedar vein is defined along a strike length of 230 m and to a vertical depth of 150 m. Drillhole CL-07-29 confirms the presence of high gold grade in the previously-known AT zone. It intersected 54.3 g/t Au over 3.4 m, true width is estimated to be 70-75% of the intercept.

The **BQ** property located 50 km northwest of Smithers contains recently recognized epithermal gold mineralization that was explored by Endurance Gold Corp. The property is underlain by gently north dipping felsic volcanic tuff and breccia intercalated with fossiliferous sandstone and mudstone, which are cut by dikes of quartz-feldspar porphyry. Mineralization occurs as stringer veins and disseminations of pyrite, arsenopyrite, pyrrhotite, sphalerite and chalcopyrite. Gold is most closely associated with arsenopyrite. Endurance Gold contracted an 814 line km airborne survey that collected high resolution EM and magnetic data. This was followed up by a 600 sample soil geochemical grid and a 10 km IP survey.

Near French Peak located 65 km northeast of Smithers, Grizzly Diamonds Ltd explored the Ute and Rio silver-gold-copper-lead-zinc veins on the **Peak** claims (MINFILE 093M 015) with a 2293 m diamond drilling program. Eleven holes expanded the strike length of the Ute vein and breccia zone. Nine holes tested a conformable pyrite-chalcopyrite vein in the Rio zone. The volcanic hostrocks are correlated with the Cretaceous Rocky Ridge Formation. No results were available.

Finlay Minerals explored for a continuation of silver-copper mineralization south of the closed Equity Silver mine on the **Silverhope** property (MINFILE 093L 256). Four holes (1720 m) were completed. Highlights include a 9.35 m intercept that graded 333 g/t Ag and 0.69% Cu in SH07-02 and 3.8 m that graded 159 g/t Ag and 1.09% Cu in SH07-04.

Christopher James Gold Corporation prospected and conducted soil geochemical surveys at its **Deer Horn** (MINFILE 093E 019), **Dome Mountain** (MINFILE 093L 277) and **Happy Sullivan** gold properties. A new copper-silver-barite occurrence, the Peggy showing, was found on Dome Mountain. Channel samples from hand-dug trenches returned 0.7% Cu and 60 g/t Ag over 5 m (M. Renning, pers. comm., 2007; Figure 1.43).

The **Rocher Deboule** project of Rocher Deboule Minerals Corporation targets an iron oxide copper-gold deposit in the vicinity of the historic Rocher Deboule (MINFILE 093M 071) and Highland Boy (MINFILE 093M 070) past-producing mines. High-temperature hydrothermal veins in a granodiorite pluton contain copper, silver, gold, tungsten, zinc, lead, molybdenum, uranium and cobalt. The veins also contain magnetite, specularite and tourmaline. Six holes (1100 m) were drilled.

Figure 1.43. Lisa Pettenuzzo and Mike Renning describe a new showing on Dome Mountain.

SPECIALTY METALS

Figure 1.44 shows the location of specialty metal projects and coal projects. Fireside barite quarry, selected jade producers and aggregate-for-export projects are also shown.

Hard Creek Nickel Corporation conducted the largest drilling program in Northwest region as it continued to define a bulk-tonnage nickel deposit on the **Turnagain** property, 70 kilometres east of Dease Lake. The Turnagain serpentinized ultramafic body contains zones of disseminated, net-textured pyrrhotite with minor pentlandite and rare chalcopyrite. The Horsetrail zone (MINFILE 104I 119) contains a measured and indicated resource of 489 152 000 tonnes grading 0.163% nickel contained in sulphide minerals and 0.012% cobalt. The resource estimate includes the first 19 holes of the 74 drilled in the 2007 program (totaling 24 500 m). Sulphide nickel grades are based on selective leach analyses that constitute 60-90% of the total nickel which averages 0.222%. An additional 560 million tonnes is inferred at 0.152% nickel. A preliminary assessment of the project indicates a 12.2% internal rate of return based on a production rate of 50 000 tonnes per day, a capital cost of C$1380 million and 73.6% nickel recovery. A four tonne sample for metallurgical testing was extracted using PQ core. The objective is to produce a concentrate grading at least 8% nickel and less than 8% magnesium oxide, a component that is detrimental to nickel smelters (N. Froc, pers. comm., 2007).

The **Rossing** project in the Jennings River – Swan Lake – Cassiar area targets highly fractionated granite batholiths primarily for a uranium deposit. Rossing is a large bulk-tonnage uranium mine in Southwest Africa and represents the deposit-type sought by Garnet Point Resources Corp. Thirteen properties were acquired in areas underlain by the Glundebery, Cassiar and Simpson Peak batholiths and more than 1100 stream silt and 1700 soil samples were collected. While uranium is the principal target, tantalum, molybdenum and tungsten are also of interest. Follow-up exploration will occur on the **Swan** (MINFILE 104O 010) and **Nazcha** properties for molybdenum mineralization and on the **Cas** property for uranium.

COAL AND AGGREGATE PROJECTS

Coal in Northwest region occurs in the Jurassic-Cretaceous Bowser sedimentary basin, notably as extensive deposits of anthracite in the Klappan-Groundhog coalfield. The reader is referred to the section on mine development projects for an update on the Klappan project. The Bowser basin measures 300 by 150 km, though it is structurally compressed from its original extent. Smaller Cretaceous and Tertiary basins also contain coal, such as the Terrace-Kitimat graben which has not been explored for many years.

Jet Gold Corporation carried out a drilling program in the Terrace-Kitimat graben on the **Naskeena** thermal coal deposit (MINFILE 103I 002) located 50 km north of Terrace. Sixteen holes (1215 m) were completed but further work was curtailed by unavailability of drilling equipment. Age of the coal measures is uncertain as the separation of Bowser Lake Group (Jurassic) and Skeena Group (Cretaceous) is not distinct. Work by Jet Gold re-located coal showings found by G.F. Monckton in 1914 but were incorrectly plotted on maps when the Big Cedar and Little Cedar drainages were renamed (Figure 1.45). Coal explorers in the 1970s were unable to find the historic showings. The best hole in 2007 cut 4.8 m of coal in a 30 m interval beginning 15 m below surface. Overburden up to 20 m thick comprises glacial till and clean gravel in a 1.5 km-wide paleochannel of the Nass River (D. McRae, pers. comm., 2007).

Nass Valley Gateway Ltd evaluated a granite rock quarry site at **Nass Bay** near Kincolith where the Nass River enters the Portland Canal. Twenty-three holes totaling 3000 m were drilled. The granite could be loaded onto ships or barges as rock or crushed aggregate for construction purposes for the local (Prince Rupert) or offshore market.

OUTLOOK FOR 2008

The year 2008 may prove to be a pivotal year in mineral exploration and development in Northwest region. If mine construction resumes at Galore Creek and becomes full-scale at Ruby Creek and Tulsequah Chief then the mining boom will be sustained. Development projects with broad First Nation support and a contractual impact and benefits agreement have a clear advantage in proceeding forward. It is encouraging that Galore Creek,

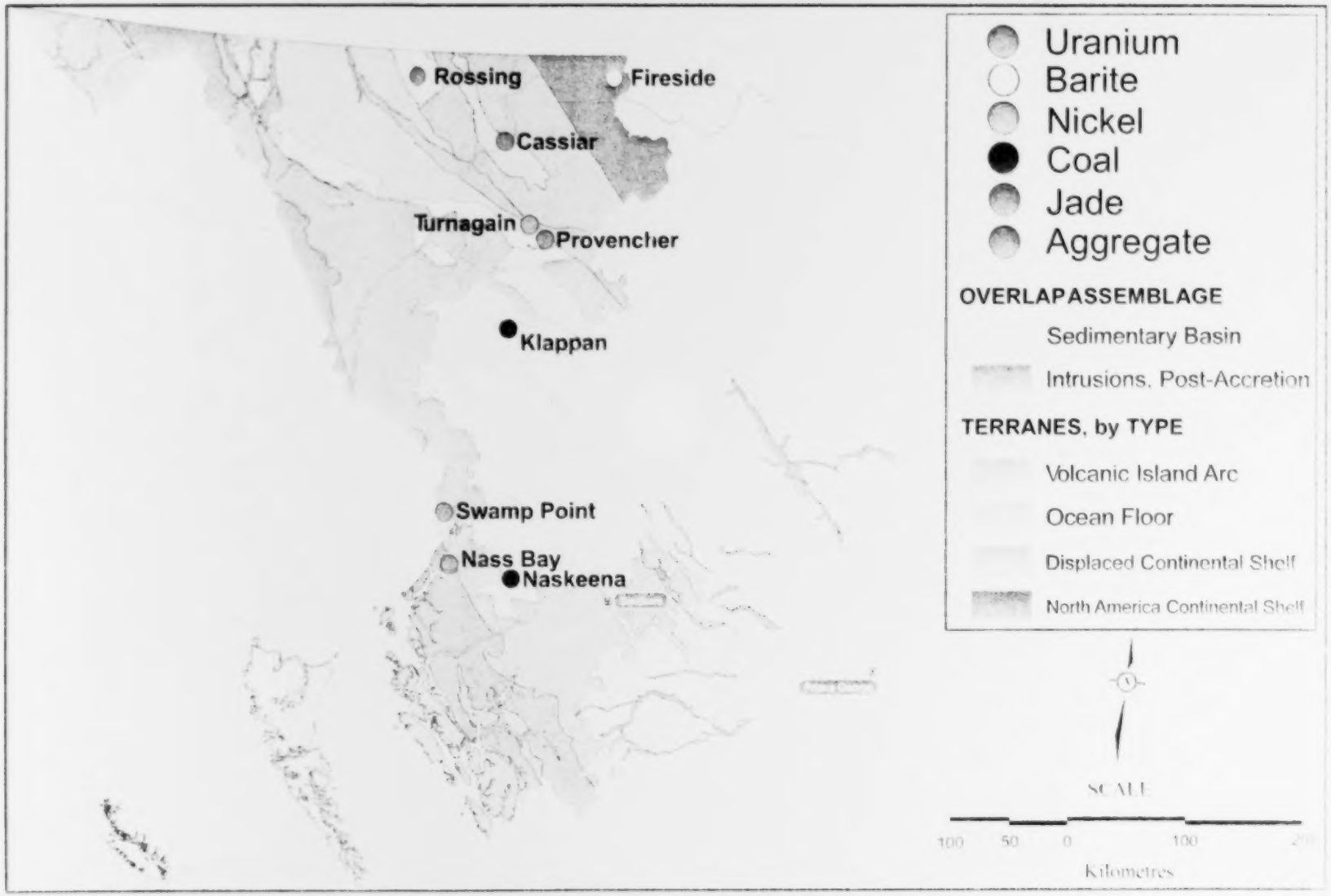

Figure 1.44. Map of uranium, barite, nickel, coal, jade and aggregate projects.

Figure 1.45. Naskeena coal property; immediate footwall to #1 seam exposed on Big Cedar River.

Ruby Creek and Tulsequah Chief Projects have achieved this. The proposed acquisition of the Kutcho Creek project by an operating company is a positive development, especially because that company has a recently proven track record of bringing a new mine into production on-time and on-budget. If Kutcho Creek is approved for development, a production decision is anticipated in the second-half of 2008. If continuation of deep drilling at Red Chris outlines sufficient copper-gold mineralization, an alternative mine plan to an open-pit may be considered.

The workforce at the Eskay Creek mine, already reduced during 2007, will shrink further when the mine closes in early 2008. Many employees have been transferred to other Barrick Gold operations, and contractors have readily found work at other mines.

The sustained high price for molybdenum and forecast continuation suggests the mine and mill expansion at Endako mine will proceed. It may be necessary to reduce pit slopes and thereby increase the stripping ratio in the Endako pit.

Owners of the Kerr-Sulphurets gold-copper project and the Turnagain nickel project have both declared their intent to enter the Environmental Assessment (EA) process in early 2008. Both are huge bulk tonnage deposits with a high capital cost and high power requirement, underscoring the need for grid power along the Highway 37 corridor. The scale of these two projects will ultimately require a major operating company to develop. If this involvement transpires in 2008 then it will be a considerable boost to exploration that is already robust in the region. Two more projects, Lucky Ship molybdenum and Berg copper-molybdenum may also enter the EA process. If go-ahead decisions are made by the respective proponents, this would further augment exploration in the region.

Promising discoveries in Northwest region, such as the new gold-silver zones at Treaty Creek, and significant resource improvement, such as the Ajax and Lone Pine molybdenum prospects, could also propel an increase in exploration in 2008.

ACKNOWLEDGMENTS

The author is very thankful for the contributions made by the mine staff, exploration geologists and prospectors who work in northwest B.C. This report would not be possible without their input. Their hospitality while visiting projects is greatly appreciated. Special thanks also to Peter Chan, Doug Flynn, Jill Pardoe and Janice Girling of the Ministry of Energy, Mines and Petroleum Resources. Any errors or omissions remain the responsibility of the author. Skilful work by Garry Payie to prepare this paper is appreciated.

NORTHEAST REGION

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SUMMARY AND TRENDS

The year 2007 would perhaps best be described as a year of consolidation in the Northeast Region. Late in 2006 Northern Energy and Mining Inc (NEMI – 20%), Hillsborough Resources Ltd (14%) and Anglo Coal Canada Ltd (66%) jointly created a new entity, the Peace River Coal Limited Partnership - the operating entity for which, Peace River Coal Inc (PRC), now manages most of the Northeastern British Columbia coal assets previously assigned separately to the companies. PRC operates the **Trend** mine south of Tumbler Ridge, to which it intends to add production from the adjacent **Roman Mountain** deposit in 2009.

Western Canadian Coal Corp (WCC) continued operation of the **Perry Creek** mine within the **Wolverine Project** west of Tumbler Ridge, and of the **Brule** mine south of Chetwynd. Late in 2006, Pine Valley Mining Corp suspended mining operations at its **Willow Creek** mine. WCC purchased that property and infrastructure in June 2007, with the intent of re-commencing operations in 2008. In November 2007 WCC announced a conditional agreement to acquire Falls Mountain Coal Inc from Cambrian Mining PLC.

Other developed projects which the proponents intend to advance are **EB** (WCC), **Gething** (Canadian Dehua International Mines Group Inc), **Goodrich Central South** (First Coal Corp), and **Wapiti** (Hillsborough Resources Ltd).

Kennecott Canada Exploration Inc actively explored its **Murray River** property southeast of Tumbler Ridge, and both PRC and WCC were very active on their properties; but other projects saw little or no field activity in 2007. Estimated exploration expenditures for 2007 stood at $10.5 million, down from $19.9 million in 2006. Similarly 2007 drilling activity dropped to about 37 400 m, down from 66 000 m in 2006.

Locations for mines, developments and exploration projects are shown in Figure 2.1.

COAL MINES

There were three operating coal mines in the Northeast Region in 2007, namely PRC's **Trend** mine, and WCC's **Wolverine (Perry Creek)** and **Brule** mines.

Peace River Coal's **Trend** mine, commissioned in January 2006, is located about 25 km south of Tumbler Ridge. Medium-volatile bituminous coal is being mined from the Lower Cretaceous Gates formation (D, E, F, G/I and J seams) with a cumulative coal thickness of 15 m, in a narrow pit that exploits a tight upright fold (Figure 2.2). Production in 2007 is targeted at 1 million tonnes/year of clean metallurgical coal, with a permitted annual production of 2 million tonnes/year. This output is expected to be reached in 2008, with a potential expansion to 6 million tonnes/year by 2011 as the nearby **Roman Mountain** deposit is added to production. Roman Mountain will also extend the mine life, currently estimated at about 10 years. Total reserves stand at 370 million tonnes. The work force, currently at about 80, will increase concomitantly to close to 300.

PRC's loadout facility, a few kilometres north of the Trend mine (Figure 2.3), was completed in 2007. From this starting point the company ships, through Ridley Terminals Inc at Prince Rupert, to markets in Japan, Korea and Europe. PRC is looking for opportunities to expand its markets further.

Western Canadian Coal's **Wolverine** Project, about 25 km to the northwest of Tumbler Ridge, saw continued production from the **Perry Creek** mine, which began operations in July 2006 (Figure 2.4). Current production of about 2.2 million tonnes/year of metallurgical coal is from the Gates Formation (E, F, G and J seams) with a cumulative coal thickness of 15 m.

Figure 2.2. Drilling and mining operations in the Gates Pit, Trend mine.

Figure 2.1. Operating mines, development projects and major exploration projects, Northeast Region, 2007.

Figure 2.3. Operations at Peace River Coal's Loadout Facility.

Output is projected to increase to 3 million tonnes/year–the capacity of the preparation plant (Figure 2.5). Shipping is through Ridley Terminals Inc to markets in Asia, Europe and South America. Current total reserves stand at 27.7 million tonnes. The Perry Creek pit is planned to be enlarged, and pit life extended thereby to about 10 years at the projected production rate.

WCC's **Brule** mine is located about 45 km south-southwest of Chetwynd adjacent to the former Dillon mine, which closed in September 2006 after reserves were exhausted. Coal is extracted from the Brule and Blind pits in the Gething Formation – from the Lower Seam, Upper Seam and Seam 60 with a cumulative thickness of 12.2 m (Figure 2.6). As in the case of the other producing mines in the Region, the rock units are deformed into tight upright folds, making for a long and narrow trough-shaped pit. Brule began shipping in March 2007 at a rate of 1 million tonnes/year, and the

Figure 2.4. Mining operations at Wolverine (Perry Creek - Phase 2).

plan is for an increase to 2 million tonnes/year of mostly PCI coal. Reserves stand at about 22 million tonnes, and on-lease exploration drilling of about 2400 m may extend this.

At present coal is trucked to the Bullmoose loadout facility, but plans are to build a road northward to the **Willow Creek** mine to make use of that facility's wash plant and shipping infrastructure. At present the Brule mine employs about 60 workers on-site.

Mining activity is summarized in Table 2.1.

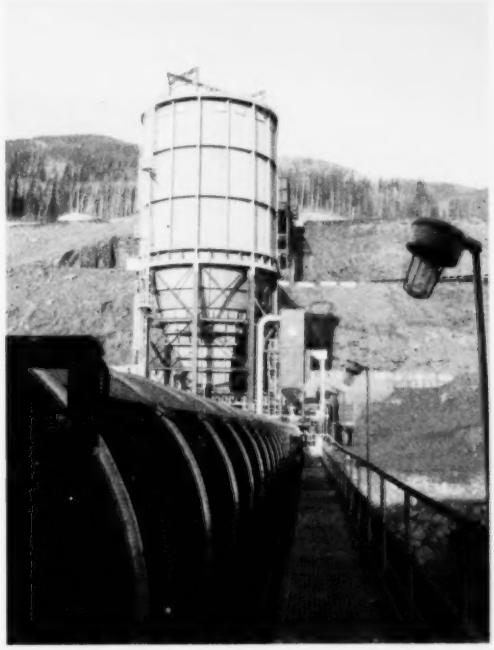

Figure 2.5. Wolverine Project: grizzly and conveyor at Perry Creek mine.

COAL EXPLORATION PROJECTS

There were 11 major exploration projects (Table 2.2), some of which were being advanced to the pre-development or development stage.

Hudson's Hope Area

Canadian Dehua International Mines Group Inc intends to develop its **Gething** property, located about 25 km west of Hudson's Hope, as an underground operation. Potentially 400 workers would be employed,

Figure 2.6. Mining Operations in Blind Pit, Brule mine.

shipping 2.0 million tonnes/year of clean metallurgical coal to markets in Asia *via* the Ridley Island terminal at Prince Rupert. Production would be from the Lower Cretaceous Gething Formation, in which previous exploration had identified 8 significant coal seams in the upper 150 m. The inferred resource is 98 million tonnes of coal, and production from the mine and on-site preparation plant would be about 2 million tonnes of clean coal annually. By late 2007, the project was in the Environmental Assessment pre-application stage. Detailed exploration is planned for 2008, together with a feasibility study and the submission of the Environmental Assessment report.

Chetwynd – Pine River Area

Operations at Pine Valley Coal's **Willow Creek** mine were suspended in October 2006. The mine had produced PCI coal primarily from its 7C Pit, and metallurgical coal from its 4 Pit – in aggregate about 350 000 tonnes from Gething Formation seams. The mine area is more complex structurally than those to the south, and is characterized by tight anticlines and synclines overturned to the west. Deformation was sufficiently intense that, in places, coal was tectonically mobilized (Figure 2.7). In June 2007 Western Canadian Coal Corp purchased the property, with the intent of placing the mine under "care and maintenance" for 2007 and bringing it back into production in 2008. During 2007, 17 rotary and 3 core boreholes totalling 2001 m were completed.

First Coal Corp pursued a modest drilling program on its **Goodrich Central South** property southwest of the former Willow Creek mine. About 41 million tonnes of measured and indicated, and 32 million tonnes of inferred metallurgical coal resource has been identified in the Gething Formation and especially in the underlying Bickford Formation. First Coal plans to extract a 100 000 tonne bulk sample in 2008 leading to

Figure 2.7. Coal injection at Willow Creek.

a hoped-for mine permit in 2008-2009. Contingent upon a successful outcome, the property may advance to mine permitting in 2009.

South of Tumbler Ridge

Peace River Coal continued evaluation of its **Roman Mountain** project close to the Trend mine, completing almost 21 000 m of drilling. About 27 million in-place tonnes of coal had been identified as of June 2007. The coal measures at Roman Mountain occur in a tight upright syncline at the top of the mountain and are extend for up to 7 km along strike. The Environmental Assessment process for the project began in November 2007, and the intent is that it be completed in 2008 with production in 2009 subject to approvals being in place.

An additional 1600 m of drilling was completed at PRC's **Horizon** project, with an Environmental Assessment Application expected to be submitted late in 2008. About 42 million tonnes of metallurgical and PCI coal resource have been identified, with production expected beginning in 2010 at 1.2 million tonnes/year from gently-folded coal measures in the Gates and Gething Formations.

Kennecott Canada Corp had planned up to 7

Mine	Operator	Deposit Type/ Commodity	Work Force	Forecast Production (2007), tonnes	Proven and Probable Reserves (effective date)
Trend	Peace River Coal Inc	Metallurgical Coal	~80	1 000 000 t	21.6 million tonnes ROM (June 2007)
Wolverine (Perry Creek)	Western Canadian Coal Corp	Metallurgical Coal	~175	2 200 000 t	35.8 million tonnes ROM (16 March 2006)
Brule	Western Canadian Coal Corp	PCI coal	~60	750 000 t	22.5 million tonnes ROM (27 Oct. 2005)

TABLE 2.2. SIGNIFICANT EXPLORATION PROJECTS, NORTHEAST REGION, 2007

Property	Operator	MINFILE (Map ref.)	Commodity	Deposit Type	Work Program
Brule	Western Canadian Coal Corp	093P 007	ULV (Ultra-Low Volatile) PCI Coal	Sedimentary	DD (2418 m)
Gething	Canadian Dehua International Mines Group Inc	093O 025, 094B 013, 037	Coking Coal	Sedimentary	EN
Goodrich Central South	First Coal Corp	093O 034	Coking Coal	Sedimentary	FS, TR, DD (1000 m)
Hermann	Western Canadian Coal Corp	093I 031	Coking Coal	Sedimentary	EN
Horizon (Five Cabin)	Peace River Coal Inc	(093I 086)	Coking Coal /PCI Coal	Sedimentary	A, PD (1670 m)
Murray River	Kennecott Canada Exploration Inc	(093P 005)	Coal	Sedimentary	A, DD (921 m)
Perry Creek (EB)	Western Canadian Coal Corp	093P 015	Coal	Sedimentary	DD (4404 m)
Perry Creek (Wolverine)	Western Canadian Coal Corp	093P 025	Coking Coal	Sedimentary	PD, DD (4212 m)
Roman Mountain	Peace River Coal Inc	093I 030	Coking Coal	Sedimentary	A, PD (20 797 m)
Wapiti	Hillsborough Resources Ltd	093P 021	Thermal Coal	Sedimentary	TR, PD (800 m)
Willow Creek	Western Canadian Coal Corp	093O 008	Coking Coal/ PCI Coal	Sedimentary	A, PD (2501 m)

Work Program Abbreviations:

A = access, trail, road construction on claims; AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X tonnes) = bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (X m) = diamond drilling totaling X metres; EN = environmental baseline studies/monitoring, remediation work; FS = feasibility studies; G = geology, mapping, etc.; GC = geochemical sampling (rock, soil, silt, etc); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; G-IP, MG = magnetics; MK = marketing-primarily for industrial mineral products; MS = metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; R = reclamation; RC = reverse circulation drilling; TR = trenching; UG (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

drillholes on its **Murray River** property southwest of Tumbler ridge to test seams in the Gates Formation; but abandoned the project after only two holes, totalling 921 m, had been completed encountering significant overpressures of water and gas. The company plans to return to the area in 2009.

Wolverine Valley Area

Western Canadian Coal undertook an extensive drilling program around the **Perry Creek** mine in its Wolverine Project area, with a view to defining and extending reserves to about ten years at the projected production rate. Forty-six core holes and 14 rotary boreholes were completed, totalling 4212 m. The Perry Creek pit is planned to be enlarged, and pit life extended thereby to about 10 years at the projected production rate.

Included in the Wolverine Project is the nearby **EB** deposit. Whereas the Gates Formation beds at the Perry Creek operation are characterized by tight upright folds, at EB the unit is nearly flat-lying. About 7.4 million tonnes of ROM metallurgical coal are at EB, and were delineated by some 4400 m of drilling in 2007.

WCC's **Hermann** project is located south of the Perry Creek mine and about 16 km southwest of Tumbler ridge. Exploration drilling on the property is complete, and the proposed mine remains in the Environmental Assessment process. Mining would be from four pits to access five seams (E, E4, F, G and J) the Gates Formation, having an aggregate thickness of 14.8 m. From a coal resource of about 9.0 million tonnes, production would be at the rate of 0.8 and 1.1 million tonnes/year.

Peace River Coal continued evaluation of its **Horizon** property with a drill program totalling slightly over 1600 m. A resource of about 42 million tonnes of metallurgical and PCI coal has been identified, with production – both open pit and underground – anticipated beginning in 2010 at 1.2 million tonnes/year.

Dawson Creek to Tumbler Ridge

Hillsborough Resources Ltd completed about 800 m of drilling at its **Wapiti** thermal coal project, located about 40 km northeast of Tumbler Ridge. The coal measures occur within the Upper Cretaceous Wapiti Group. Plans for coal production to supply a nearby electrical generation facility were shelved when the province declined to support coal-fired power generation. Nevertheless, assessment of the property continues and the company is exploring export opportunities. A measured resource of 80 million tonnes has been defined in this relatively flat-lying section, and a development decision is expected in March 2008.

METAL EXPLORATION PROJECTS

Activity on the **Trident** project joint venture (Action Minerals Inc and Aries Resource Corp), about 170 km west of Fort Nelson, was minimal in 2007. The project followed-up on several magnetic anomalies, one of which marked the Missy high grade copper mesothermal vein that was the subject of previous investigation.

OUTLOOK FOR 2008

Coal production in 2008 is expected to increase from all of the producing mines in the Region. Production may be increased further if Western Canadian Coal brings the Willow Creek mine back into production and expands production at Wolverine by mining the EB deposit. Meanwhile, Peace River Coal will be working toward a further expansion of activity in the Trend mine area with production from the Roman Mountain deposit anticipated in 2009 and subsequent production from the Horizon (Five Cabin) deposit.

Proposals for new coal mines continue to be developed by Canadian Dehua International Mines Group Inc (Gething), First Coal Corp (Goodrich Central South), and Hillsborough Resources Ltd (Wapiti). Assuming that one or more these proposals comes to fruition, the next decade could see a major step-up in coal production.

ACKNOWLEDGMENTS

The writer acknowledges with thanks the support of staff in the Prince George Regional Office, and in particular that of the previous Regional Geologist, Bob Lane. Explorationists and mine staff throughout the region were generous in providing information and advice.

NORTH-CENTRAL REGION

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SUMMARY AND TRENDS

The North-Central Region was a hotbed of mineral exploration in 2007, with major increases over 2006 with respect to the number of significant projects, drilling activity, and expenditures. The principal focus of interest continued to be porphyry copper-gold prospects in the Quesnel and eastern Stikine terranes. In addition to porphyries, exploration targets included mesothermal and epithermal vein deposits in the Barkerville, Quesnel and Stikine terranes; and sedimentary-exhalative polymetallic deposits and a carbonatite-hosted deposit in the Foreland Belt.

In June 2007 Geoscience BC announced its QUEST (QUesnellia Exploration STrategy) program, a regional geophysics/geochemistry survey covering much of the Quesnel Terrane from Williams Lake to west of Mackenzie. Within two months of the announcement some 438 000 ha of new mineral tenure had been acquired. Interest in mineral exploration and development was so high throughout the region, however, that in some cases companies found it difficult to obtain appropriate drilling equipment and/or experienced crews, and in some cases professional staff; and commonly experienced long delays in receiving assay results.

Exploration expenditures increased for the eighth consecutive year, and at an estimated $94.6 million were slightly more than double the 2006 amount. Likewise, exploration drilling, at 302 600 m, was about 70 per cent higher than the 2006 figure (Figures 3.1, 3.2).

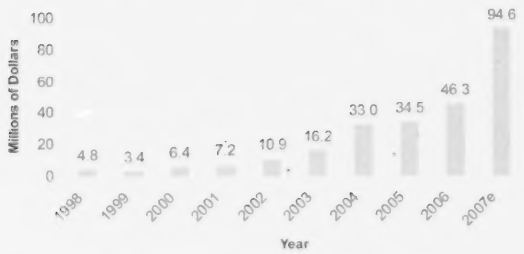

Figure 3.1. Annual exploration expenditures, North-Central Region.

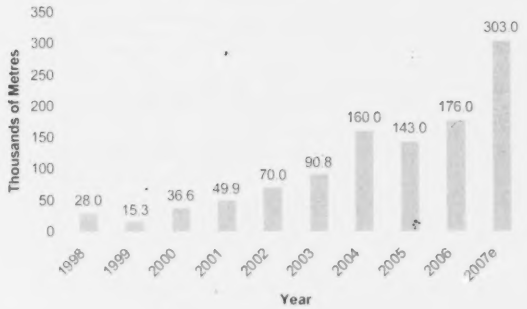

Figure 3.2. Annual Exploration Drilling, North-Central Region.

Exploration highlights, in alphabetical order, included:

- intensive diamond drilling on the Akie zinc-lead-silver sedimentary exhalative prospect in the Gataga-Kechika Trough area;
- an encouraging discovery of a deep gold-copper porphyry deposit at the Brenda property in the Toodoggone Camp;
- major drilling program at the Chu porphyry molybdenum prospect to define the extent of the mineralized zone;
- a very active drilling program on the Gibraltar mining lease with the aim of further extending reserves;
- a major drilling program in the Giscome area to define a limestone resource;
- an extensive drilling and geophysical exploration program on the Orus and Alta zones in the Kemess East area;
- continuation of a systematic drilling program to delineate alkalic porphyry mineralization at Kwanika;
- drilling at the Mount Milligan property in advance of competing a feasibility study of the project;
- extensive drilling in and around the Mount Polley mine aimed at extending reserves;

- extensive drilling and geophysics at Nithi Mountain to define the porphyry molybdenum deposit there, especially in the "Gamma zone";
- extensive underground exploration of the North and West zones at the QR mine;
- systematic drilling at Spanish Mountain to define the "sediment-hosted vein" gold deposit there;
- discovery and exploration of the "Southeast zone" at the Woodjam copper-silver porphyry prospect.

Production continued from the three open pit metal mines in the Region – Gibraltar, Mount Polley and Kemess – with all three enjoying a productive and profitable year. In November 2007, however, Northgate Minerals Corp "wrote down" its investment in exploring and developing Kemess North after a joint Canada-BC Review Panel concluded that "development of the...Kemess North Project in its present form would not be in the public interest."

In late November 2007 Cross Lake Minerals' QR mine began full production from its gold skarn deposit near Likely. Initial production is from two existing open pits, with additional production to be underground. The Shasta underground gold mine in the Toodoggone area did not process any ore in 2007, but preparations were well underway for production to begin again in 2008.

Estimated production and reserves of operating mines are provided in Table 3.1. Locations of mines and exploration projects discussed in this report and considered to be of regional significance are shown in Figure 3.3.

TABLE 3.1. FORECAST MINE PRODUCTION, NORTH-CENTRAL REGION, 2007

Mine	Operator	Mine Workforce	Forecast Production (tonnes or kilograms)	Proven and Probable Reserves (effective date)
Metals				
Mount Polley	Imperial Metals Corp	~350	25 million kg Cu, 1560 kg Au, 12 600 kg Ag	59.9 million tonnes grading 0.36% Cu, 0.27 g/t Au, 0.73 g/t Ag (January 2007)
Gibraltar	Taseko Mines Ltd	~300	23.5 million kg Cu 263 100 kg Mo (fy ending 30 Sept.)	384 million tonnes proven grading 0.31% Cu, 0.009% Mo (September 2007)
QR	Cross Lake Minerals Ltd	~45	At start of production	356 000 tonnes grading 5.7 g/t Au (September 2007)
Kemess south	Northgate Minerals Corp	~400	7825 kg Au, 31 200 tonnes Cu	67.3 million tonnes (May 2007)
Industrial Minerals				
Giscome	Pacific Lime Products Ltd	2 (seasonal)		
Nazko	Lightweight Advanced Volcanic Aggregates Inc	5 (seasonal)		44 million tonnes "proven resource"
Hunterstone	Hunterstone Quarries	~2 (seasonal)		
Giscome	Canadian National Railway Company	~5 (seasonal)		

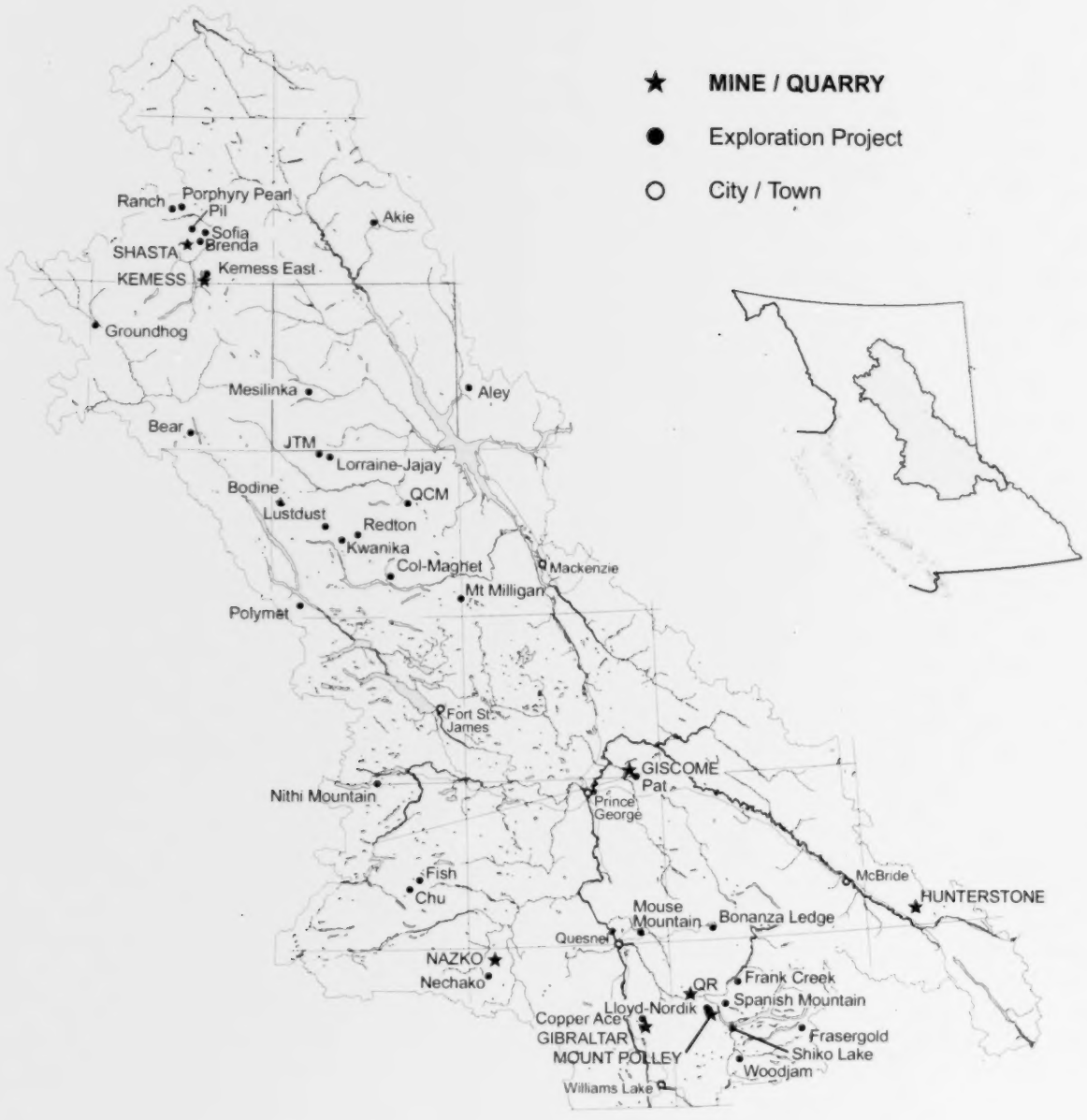

Figure 3.3. Operating mines, major exploration projects and selected smaller projects, North-Central Region, 2007.

METAL MINES

Imperial Metals Corporation's **Mount Polley** alkalic porphyry copper-gold mine, located west of the town of Likely and about 56 km northeast of Williams Lake, increased production in 2007 by about 20 per cent over 2006, with an expected output of 25 million kg of copper, 1560 kg of gold, and 12 600 kg of silver. Total proven and probable reserves as of January 1, 2007 were 59.9 million tonnes grading 0.36% Cu, 0.27 g/t Au and 0.73 g/t Ag – an increase of 18.9 million tonnes over the January 1, 2006 estimate. This increase extended mine life to May, 2015. About 32 000 m of on-lease diamond drilling in 2007 (See "Exploration Highlights," below) may allow a further extension. Production was blended from the Bell and Wight Pits, with the Wight Pit providing about 50% of the mill feed. With about 6 million tonnes remaining in the Wight Pit and 7.3 million tonnes in the Bell, both should be exhausted by the end of 2008. Stripping has begun on the Springer zone, with at least minor ore production expected before the end of 2007, and large scale production beginning early in 2008.

A 200 000 tonne test heap was operated in 2007 to prove the feasibility of leaching metal from the copper oxide cap that covers the Springer pit sulphide mineralization (Figure 3.4). Copper recoveries are expected to be in the range of 85 per cent.

Figure 3.4. Test heap leaching area at the Mount Polley mine.

The **Gibraltar** mine, owned and operated by Taseko Mines Ltd, is located about 19 km east of McLeese Lake. Production is from a copper-molybdenum calcalkalic porphyry, the so-called "mine series tonalite" (Figure 3.5). In September 2007 Taseko announced an ore reserve increase to 348 million tonnes grading 0.31% Cu and 0.009% Mo, which could provide mill feed for the next 16 years. During 2007, the company undertook a major on-lease exploration program of about 44 000 m of diamond drilling with the goal of adding to the mine's reserve base.

Figure 3.5. Ore truck at the Gibraltar mine.

The Solvent Extraction and Electrowinning plant at Gibraltar was refurbished by the end of 2006, and by mid-2007 about 590 000 kg of copper cathode had been produced. The facility has the capability of producing over 3 million kg annually from oxidized copper ore stockpiled on the property.

A first phase of mill expansion was to be completed by the end of 2007, which will enable throughput to reach 46 000 tonnes/day. A further expansion to 55 000 tonnes/day is planned for 2008. At that point Gibraltar's annual production is expected to be 54 million kg of copper and 650 000 kg of molybdenum. Concentrate is shipped by rail through the port of North Vancouver.

A gold pour in late November 2007 at Cross Lake Minerals Ltd's **QR** mine marked the start of full production from the operation. The Cross Lake project, located about 58 km southeast of Quesnel and a few km north of the Mount Polley mine, involved reactivating an open pit and underground mine that had been operated by Kinross Gold Corp until 1998. An operating permit for the refurbished mine was received in September 2006, and the mill was recommissioned in September 2007 (Figure 3.6). Initial production is from the new Northwest pit to be followed by the West pit, and the intent is to mine from underground on the West and Midwest zones beginning in about April 2008. Startup reserves of about 356 000 tonnes at 5.7 g/t Au allow for a mine life of about two years, but the company is optimistic that this can be extended.

Northgate Minerals Corp continued operations on its **Kemess** copper-gold mine, located in the Toodoggone area about 300 km northwest of Mackenzie. The East and West lobes of the Kemess South open pit are developed in a porphyry deposit within the late Triassic quartz monzonite "Maple Leaf" pluton, and encounter uniform grades throughout (Figure 3.7). As of May 2007, total

Figure 3.6. Crusher and Mill at the QR mine.

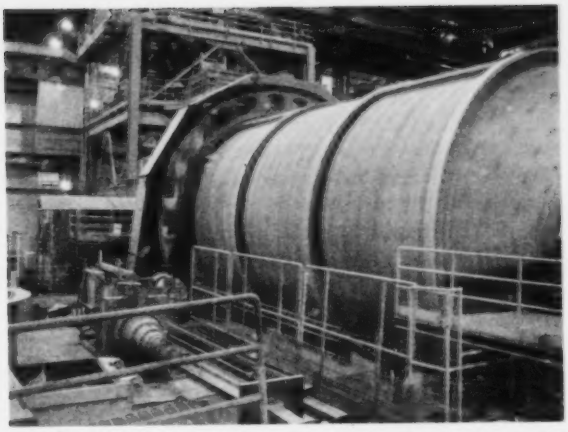

Figure 3.8. Ball mill in operation in the Kemess mine concentrator.

Figure 3.7. Kemess South mine area.

Figure 3.9. Screening operation at the Nazko quarry.

reserves stood at 67.3 million tonnes, and projected 2007 production is 7200 kg gold and 29 400 million kg copper. About 50 million tonnes per year are mined to feed a 52 000 tonne/day mill (Figure 3.8), and the projected mine life is to 4th quarter 2010. Production forecasts for 4th quarter 2007 were reduced by the need to realign a portion of the ramp system in the west end of the Kemess South pit. Realignment is expected to be complete in January 2008, and the milling schedule restored.

Hopes for extending mine life had been pinned on development of the **Kemess North** deposit, located a few kilometres away across a small mountain, and in 2007 concentrated exploration activity on the nearby Kemess East area. In September 2007 the Canada-BC Joint Review Panel concluded that "development of the...Kemess North Project in its present form would not be in the public interest." Northgate had proposed to dispose of tailings from Kemess North in nearby Duncan (Amazay) Lake, and this the panel had found especially problematic even though it met the formal environmental requirements. Subsequently, and without waiting for a Ministerial response to the recommendation, Northgate suspended exploration activity and wrote down its investment in the project. Kemess North proven and probable reserves, as of the end of 2006, were 423.9 million tonnes grading 0.30 g/t Au and 0.16% Cu.

QUARRIES

During 2007 Lightweight Advanced Volcanic Aggregates Inc reinitiated small-scale production of lightweight aggregate and scoria from its **Nazko** quarry about 100 km west of Quesnel. Up to 50 000 tonnes/yr have been removed historically from this, the only quarry of its type in Canada, with the product used as fill for construction, concrete blocks, barbecue rock and landscaping (Figure 3.9). The volcanic materials being extracted are the product of an eruption that took place about 7200 years ago. In October 2007, renewed minor seismic activity took place in the area, indicating magmatic activity at depths in excess of 20 km. Renewed volcanic activity might be in the area's distant future.

Chemical Lime Company of Canada Inc operates a small limestone quarry about 5 km southeast of **Giscome**. The 2007 year appears to have been inactive for Chemical Lime, with any shipments being from stockpiled material. Within the community of Giscome itself, Canadian National Railway Company continued production from its **Giscome** volcanic rock quarry to supply road ballast requirements for maintenance of its main line and spur line. **Hunterstone** Quarries, near Valemont, continued low-level production of talus-derived quartzite dimension stone for specialty construction.

EXPLORATION HIGHLIGHTS

Significant exploration projects in the North-Central Region are listed in Table 3.2. The compilation, from which the tabulated information and the information in the text was derived, was assembled prior to the end of the calendar year and contains estimates as well as hard data. There were 37 major exploration projects (in excess of about $500 000 in expenditure) – a substantial increase from 2006 – and among that group, eighteen had expenditures of $1 000 000 more. Table 3.2 offers a more comprehensive summary of exploration activity.

TABLE 3.2. SIGNIFICANT EXPLORATION PROJECTS, NORTH-CENTRAL REGION, 2007

Property	Operator	MINFILE (Map ref.)	Commodity	Deposit Type	Work Program
Ace, Frank & SCR	Barker Minerals Ltd	093A 142, 152, 203	Cu-Zn-Pb-Au-Ag	VMS; Mesothermal Vein	TR, DD (~1000 m)
Addie 2	Dajin Resources Corp	(093A.043,044)	Au	Mesothermal Vein	A, TR
Akie	Mantle Resources Inc	094F 031	Zn-Pb-Ag	Sedimentary Exhalative	G, DD (15 000 m)
Aley	Taseko Mines Ltd	094B 027	Nb	Carbonatite	A, DD (1379 m)
Axelgold	Caracle Creek Int'l Consulting Ltd	093N 196	Au-Ag-Sb-Cu	Epithermal Vein	G, GC
Baldy	NovaGold Resources Inc	(093G.075, 065,066)	Cu-Au	Porphyry	DD (700 m)
Bear	Imperial Metals Corp	094D 068	Mo-Cu	Porphyry	IP, DD (946 m)
Black Pete	Sable Resources Ltd	(094E.035)	Au-Cu	Vein	A, Tr
Bonanza Ledge (and Mucho Oro) (Incl. Cariboo Gold Quartz)	International Wayside Gold Mines Ltd	093H 019	Au	Mesothermal Vein	PF, A, G, DD (787 m)
Brenda	Canasil Resources Inc	094E 147	Au-Cu	Porphyry	A, IP, DD (1708 m)
Burns Mountain	Gemco Minerals Inc	(093H.002, 003)	Au	Mesothermal Vein	A, DD (~1000 m)
Captain	Orestone Mining Corp	(093J/13)	Cu-Au	Porphyry	IP, MG, GC
Carp	Geoinformatics Exploration Canada Inc	093J.072	Cu-Au	Porphyry	IP
Christina Jean/ Wildcat	Terrane Metals Corp	(093O.001)	Au-Cu	Porphyry	DD (1808 m)
Chu	TTM Resources Ltd	093F 001	Mo	Porphyry	A, MG, IP, GC, DD (6131 m)
Chuchi	High Ridge Resources Ltd	093N 159	Cu-Au	Porphyry	A, G, Tr, GC, IP, DD (~2000 m)
Clisbako	Global Geological Services Ltd	093C 016	Au-Ag	Epithermal Vein	Tr, IP
COL-Magnet	Solomon Resources Ltd	093N 101	Cu-Au	Porphyry	G, Tr, Gc, DD (~3500 m)
Copper Ace	Copper Ridge Explorations Inc	093B 062	Cu-Mo	Calc-Alkalic Porphyry	A, GC, IP, DD (3219 m)
Cowtrail	Dajin Resources Corp	(093A.043, 044)	Cu-Au	Porphyry	A, DD (~1000 m)

TABLE 3.2. CONTINUED

Property	Operator	MINFILE (Map ref.)	Commodity	Deposit Type	Work Program
Craze Creek	Golden Cariboo Resources Ltd	093H 003	Au	Mesothermal Vein	A, DD (~1000 m)
Falls Creek	Imperial Metals Corp	094D 123	Ag-Pb-Zn	Vein, Dissemination	G, GC, DD (1278 m)
Fish	Conwest Explorations Inc	(093F.028,037-039, 047-049, 056-057, 066)	Cu-Au	Porphyry	IP, 3D-IP
Fogmess	BC Gold Corp	094E 070	Cu-Au	Porphyry	A, IP
Fran	Yankee Hat Minerals Ltd	(093K.099)	Au-Cu	Alkalic Porphyry	TR, G, IP, GC, DD (~1000 m)
Frank Creek/SCR	Barker Minerals Ltd	093A 152	Cu-Zn	Volcanogenic Massive Sulphide	TR
Frasergold	Hawthorne Gold Corp	093A 150	Au	Mesothermal (?) Vein	G, Tr, GP, DD (~5000 m)
Germansen and Valleau	Serengeti Minerals Inc	(093N.046)	Cu-Au	Porphyry	IP
Gibraltar	Taseko Mines Ltd	093B 005-008, 011-013	Cu-Mo	Calk-alkalic Porphyry	DD (43 677 m)
Hepburn Lake	Acrex Ventures Ltd	(093A.053, 054,063)	Au	Mesothermal Vein	TR, DD (2446 m)
Hixon Creek	Cayenne Gold Mines Ltd	(093G.048)	Au-Ag	Vein	DD (596 m)
Indata	Eastfield Resources Ltd	093N 192	Au-Ag	Vein	GC, Tr
Jan/Tam/Misty	Teck Cominco Ltd	093N 001, 093	Cu-Au	Alkalic Porphyry	DD (~5000 m)
Jean	Newstrike Resources Ltd	093N 079	Cu-Mo	Porphyry	DD (~1500 m)
Kangaroo Gold	Barker Minerals Ltd	(093A.062)	Au	Vein and Porphyry	IP, DD (2008 m)
Kemess Ora & Altus Zones	Northgate Minerals Corp	(094E.006, 007)	Au-Cu	Porphyry	G, GC, 3D-IP, DD (18 133 m)
Kwanika	Serengeti Resources Inc	093N 018, 073	Cu-Au-Mo	Alkalic Porphyry	A, DD (~22 000 m)
Lloyd-Nordik	Valley High Ventures Ltd	093A 160	Cu-Au	Porphyry	A, DD (~3000 m)
Lorraine-Jajay	Teck Cominco Ltd	093N 002,066, 224	Cu-Au	Porphyry	G, IP, MG
Lustdust	Alpha Gold Corp	093N 008, 009	Au-Ag-Cu-Zn-Pb	Skarn, Manto, Mesothermal Vein	A, G, GC, IP, DD (2757 m)
Mar1 - Mar 4	Bullion Gold Corp	(093A.063)	Au	Vein	G, GC, Mg, DD (~2000 m)
Mesilinka	Geoinformatics Exploration Canada Inc	094C 015, 041, 042, 142	Cu-Au-Hg	Sedimentary-Exhalative	G, IP, DD (3000 m)
Mount Milligan	Terrane Metals Corp	093N 191,194	Au-Cu	Alkalic Porphyry	EN, PF, CD, DD (11 444 m)
Mount Polley	Imperial Metals Corp	093A 008, 164	Cu-Au-Ag	Alkalic Porphyry	G, TR, Mg, DD (32 000 m)
Mouse Mountain	Richfield Ventures Corp	093G 003	Cu-Au	Alkalic Porphyry	A, DD (1000 m)
Nechako and Alexis	Goldmember Ventures Corp	(093B.081)	Au-Ag	Epithermal Vein	A, 3D-IP, GC

TABLE 3.2. CONTINUED

Property	Operator	MINFILE (Map ref.)	Commodity	Deposit Type	Work Program
Nighthawk	Geoinformatics Exploration Canada Inc	(093N.016, 026)	Cu-Au	Porphyry	G, GC, IP, DD (650 m)
Nithi Mountain	Leeward Capital Corp	093F 006-016	Mo	Calk-Alkalic Porphyry	A, GC, GP, DD (26 000 m)
(Pat) Giscome	Graymont Western Canada Inc	093J 025	Limestone	Sedimentary	DD (~7000 m)
Pil (Atlas East)	Finlay Minerals Ltd	094E 024	Cu-Au	Porphyry	GC, IP, MG, GP, D (2410 m)
Pine	Cascadero Copper Corp	094E 016	Cu-Au-Mo	Porphyry	G, DD (1000 m)
Polymet/Bodine	Amarc Resources Ltd	(093N.002)	Au-Cu	Porphyry	GC, IP, MG
Porphyry Pearl	Starfire Minerals Ltd	094E 084	Au-Cu	Porphyry	DD (1798 m)
Prosperine	International Wayside Gold Mines Ltd	(093H.003)	Au	Vein	DD (1267 m)
QCM	Equity Engineering Ltd	(093N.067, 068, 077, 078)	Cu-Au	Porphyry	GC, DD (1400 m)
QR	Cross Lake Minerals Ltd	093A 121	Au	Skarn	UG (1700 m), DD (2000 m)
QUEST (QUesnellia Exploration STrategy)	Geoscience BC	N/A	Regional Survey	N/A	GC, AB-EM, Gravi
Quest Regional Survey	Serengeti Minerals Inc/Fjordland Exploration Inc	N/A	Regional survey	N/A	AB-MG
Ranch	Christopher James Gold Corp	094E 079, 085	Au	Epithermal vein	A, AB-MG, IP, DD (7193 m)
Shasta	Sable Resources Ltd	094E 050	Au-Ag	Epithermal Vein	UG (300 m), DD (2216 m)
Shiko Lake	NovaGold Resources Inc	093A 058	Cu-Au	Alkalic Porphyry	A, IP, DD (2295 m
Sickle-Sofia	BC Gold Corp	094E 237, 238	Cu-Au	Porphyry	G, IP, DD (1514 m
Spanish Mountain	Skygold Ventures Ltd	093A 043	Au	Mesothermal Vein	A, GC, DD (35 000
Swan	Golden Dawn Minerals Ltd	(094E.035)	Ag	Vein	IP, DD (1817 m)
Takla-Redton	Geoinformatics Exploration Canada Ltd	(093N.025-063)	Cu	Porphyry	G,GC, IP
Weedon	Geoinformatics Exploration Canada Ltd	(093J.055,56)	Cu	Porphyry	IP, DD (1000 m)
Woodjam	Fjordland Exploration Inc/Cariboo Rose Resources Ltd	093A 078	Au-Cu	Calc-Alkalic Porphyry	A, IP, MG, DD (3000 m)

Work Program Abbreviations:

A = access; trail, road construction on claims; AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X t bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (Xm) = diamond drilling to metres; EN = environmental baseline studies/monitoring, remediation work; FS = feasibility studies; G = geology, mapping, etc; GC = geochemical sampling (rock, etc); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; 3D-IP; MG = magnetics; MK = marketing-primarily for industrial mineral product metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; PP = Pilot pl reclamation; RC = reverse circulation drilling; TR = trenching, UG (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTE WT = washability test (coal).

TOODOGGONE - KEMESS AREA

In 2007 Northgate Minerals Corporation concentrated its exploration in the **Kemess East** area (Orus and Alta zones) close by the Kemess North and the Kemess South deposits. The company had completed 18 132 m of diamond drilling and 31 km of 3D-IP survey (Figure 3.10) before activities were suspended in November.

Canasil Resources Inc had very positive results from drilling at its **Brenda** project, located about 25 km northwest of the Kemess mine. Activities in 2007 included a 3D-IP survey and 1708 m of diamond drilling. In previous attempts, relatively shallow boreholes exploring this potential gold-copper porphyry deposit had bottomed in barren monzonite sills. Two of the deeper 2007 holes, drilled to depths of 530 and 562 m respectively, intersected Au-Cu mineralization open at depth. The average grade of 3 intercepts below 450 metres, totalling 92.84 m, was 0.68 g/t Au and 0.116% Cu; and the geophysical survey returned "strong anomalies." Copper and gold mineralization is in quartz-magnetite stockworks in strongly potassically-altered volcanic rocks.

Sable Resources Ltd continued re-development of its **Shasta** underground gold mine about 30 km north of the Kemess South mine, tapping a series of structurally-controlled, quartz-carbonate breccia veins. About 500 tonnes of ore were stockpiled and the goal is to resume shipments in 2008, making use of the Baker mill located about 11 km distant. Earlier production was by open pit in 1989, moving underground in 1990, and then by open pit in 2004-05; the earlier production yielded ore grades of 7.8 g/t Au and 530 g/t Ag. Current underground development is in the Creek zone with 500 m of underground development planned, while surface drilling targeted the East zone, Jock zone and O zone.

Finlay Minerals Ltd continued exploration of its **Pil** property, concentrating on the **Atlas East** epithermal gold-silver target. Soil and rock geochemistry, and an IP program, provided context to a 7 hole 2410 m drilling program, the results of which have not yet been released.

Christopher James Gold Corp undertook an extensive program on its 9300 ha **Ranch** high-sulphidation epithermal gold prospect, located about 310 km north of Smithers, concentrating on the Bonanza zone (Figure 3.11). Forty-five boreholes totalling 7193 m were drilled, intersecting impressive near-surface grades in an area about 300 m long by 20 m wide. Hole A07-26 returned 6.88 g/t Au over a 6 m interval. Gold grades below depths of about 60 m were insignificant, however.

During 2007 Starfire Minerals Ltd acquired the **Porphyry Pearl** property, located about 55 km north of the Kemess South mine, from Arnex Resources Ltd. A 1798 m drill program was completed, but results have not as yet been released.

Figure 3.10. Drilling on the Altus Zone, Kemess East.

Figure 3.11. Core splitting at the Ranch project.

GATAGA - KECHIKA TROUGH

Mantle Resources Inc acquired Ecstall Mining Corp in February 2007, and with it the **Akie** Sedex lead-zinc-silver project, located about 250 km northeast of Mackenzie and 50 km north of the north end of Williston Lake. The property is underlain by folded shales and siltstones of the Upper Devonian Gunsteel Formation. The mineralized zone is up to 30 m thick and is characterized by finely laminated sphalerite, galena and pyrite within a thicker pyrite-barite unit. A previous operator (Inmet) estimated the core zone resource at 50 million tonnes grading 8.52% Zn, 1.4% Pb, and 13.2 g/t Au. The 2007 program consisted of 23 drillholes totalling about 15 000 m (Figure 3.12).

Taseko Mines Ltd acquired Aley Corp in November 2007. Part of the package was the **Aley** carbonatite-hosted niobium prospect, located east of Ospika Arm, Williston Lake. Previous exploration drilling had indicated between 20 and 30 million tonnes of mineralized rock with 18 of 20 holes having intersections

Figure 3.12. Drilling platform at the Akie project.

of greater than 8 m in length averaging 0.75% Nb_2O_5. In all, 11 boreholes totalling 1379 m were completed in the 2007 program (Figure 3.13). For 2008, Taseko plans an accelerated drilling and engineering work program aimed at advancing the project towards a feasibility study.

OMINECA MOUNTAINS

Serengeti Resources Inc completed some 22 000 m of diamond drilling on 50 m centres and averaging 500-600 m in depth, to delineate further its **Kwanika** porphyry copper-gold-molybdenum deposit in the Quesnel Terrane, about 40 km east of Takla Landing and 85 km north of Mount Milligan. The 2007 results released to date show impressive copper-gold grades. For example, borehole K-07-29 intersected 48.6 m of 0.75% Cu and 2.5 g/t Au; K-07-28 intersected 322 m of 0.40% Cu and 0.40 g/t Au (Figure 3.14). A supergene copper zone grading 0.76% Cu, 0.21g/t Au extended over 119.6 m. The mineralized system is oriented in a north-northwest direction for up to 750 by 200 m across, and is up to 500 m deep.

Alpha Gold Corp's **Lustdust** property is located about 5 km north of Kwanika and is a phyllite-hosted skarn, manto, mesothermal vein gold-silver-copper-zinc-lead deposit. The claim group is underlain by weakly metamorphosed limestones, siltstones and mafic tuffs of the Carboniferous to Jurassic Cache Creek Group, that have been folded and intruded by the Eocene Glover

Figure 3.13. Heli-supported drilling at the Aley project.

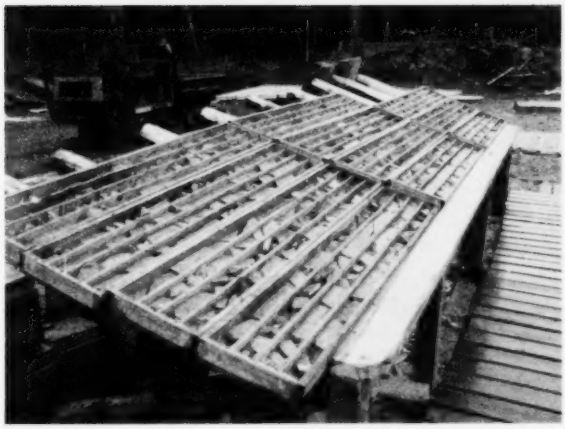

Figure 3.14. Boxes of split core at Serengeti's Kwanika camp.

stock and related dikes and sills. The complex skarn, replacement zone, and vein deposits appear to be related to a deeper-seated mineralized intrusive stock. Previous results in the skarn zone showed highly encouraging intersections. In 2007, about 50 line km of soil geochemistry and IP, mapping, and 11 boreholes totalling about 2757 m were completed. A NI 43-101 resource estimate is expected early in 2008.

Teck Cominco Ltd continued exploration on its **Lorraine-Jajay** and **Jan/Tam Misty** prospects in the Swannell Ranges northwest of Germansen Landing. Exploration targets are alkalic copper-gold deposits in the Duckling Creek Syenite Complex, with mineralization typically of disseminated chalcopyrite and lesser bornite in the syenitic and biotite pyroxenite phases. An extensive drilling program concentrated on testing Jan/Tam Misty mineralization, with a broader review of Lorraine-Jajay including about 24 km of IP and magnetics.

Late in 2007 Canadian Gold Hunter Corp began a 1400 m, 6 borehole, along with soil and silt sampling, program, on its large, low-grade gold system at **Manson Creek (QCM)** in the Germansen area. The intent is to follow-up encouraging results from the 2004, 2005 and 2006 programs, which included 141 m grading 0.78 g/t Au in hole 04-003; 70 m grading 0.69 g/t Au in hole 04-005; and 137 m grading 0.58 g/t Au in hole 05-007.

Geoinformatics Exploration Canada Inc undertook extensive exploration on its **Mesilinka**, **Takla-Redton**, **Weedon**, and **Nighthawk** properties, extending north in the Quesnel Terrane from the Northern Nechako Plateau in the Omineca Mountains area and prospective for copper-gold porphyry-type deposits. The 2007 program consisted of regional reconnaissance and mapping, soil geochemistry, and drilling especially on the Mesilinka prospect north of Tchentlo Lake.

Amarc Resources Ltd undertook an extensive program of silt and soil sampling, IP, and airborne magnetics on its **Polymet** and **Bodine** properties, located southwest of Leo Creek near the south end of Takla Lake, and about 25 km north of Takla Landing respectively. No results have been released as of yet.

Imperial Metals' **Bear** project (porphyry molybdenum-copper), about 140 km north of Smithers, saw the completion of just under 1000 m of helicopter-supported drilling, the results of which have not yet been reported.

NORTHERN NECHAKO PLATEAU

Terrane Metals Corp's **Mount Milligan** project, located about 155 km northwest of Prince George, continued to be the main focus of interest in the Northern Nechako Plateau. The deposit is hosted by the Witch Lake Succession, and is characterized by augite-phyric volcaniclastic and coeval basaltic andesites with subordinate epiclastic beds. These in turn are intruded by the Mount Milligan Intrusive Complex of coeval Takla and post-Takla monzonites (primarily). The property comprises an advanced stage alkalic porphyry copper-gold deposit with an open pit resource of 122 000 kg gold and 680 million kg copper and a projected mine life of 14.5 years (Figure 3.15). In October 2007, the company announced a preliminary economic assessment that proposed an average annual production of 7748 kg gold and 44 000 tonnes copper for the first six years of a 14.5 year mine life. Activities on the property in 2007 included 11 444 m of drilling, including condemnation drilling, in advance of a feasibility study which will be completed in early 2008.

Solomon Resources Ltd's **COL-Magnet** copper-gold porphyry property covers a total of 30 km of highly prospective ground within the Hogem Intrusive Complex of the Quesnel Terrane, and is located about 35 km southeast of Serengeti's Kwanika deposit and just north of the east end of Tchentlo Lake. Activities in 2007 included an extensive program of geological mapping, soil geochemistry, trenching and drilling. Previous results from trenching and drilling had shown encouraging copper values.

Figure 3.15. Access roads to drill pads at Mt. Milligan.

• *SOUTHERN NECHAKO PLATEAU*

Exploration was very active in 2007 on the **Nithi Mountain** porphyry molybdenum deposit, under development by Leeward Capital Corp. The deposit is located south of the community of Fraser Lake, and about 18 km east of the Endako molybdenum mine. Molybdenite mineralization at Nithi occurs in a potassically-altered quartz monzonite (Nithi Mountain Phase) of the late Jurassic to Early Cretaceous Francois Lake plutonic suite. The several mineralized zones cover an area about 4 by 2 km and are at least 200 m in depth. In 2007, the company completed about 103 boreholes totalling 26 000 m (Figure 3.16). Ninety-three of these were completed on the Gamma zone, seven on the Sigma, and three on the Delta. Leeward also completed a soil sampling program, airborne radiation/magnetics, and a Lidar survey of the property. Based on results to date, the Nithi deposit is in the range of 100 to 150 million tonnes grading 0.06% MoS_2. More intensive drilling is planned to continue in 2008.

Another molybdenum deposit, TTM Resources Inc's **Chu** prospect, is located about 75 km southeast of the Endako mine and 80 km south-southwest of the community of Vanderhoof. The deposit comprises an area of molybdenite mineralized sedimentary rocks adjacent to a granodiorite intrusive stock, with molybdenum showing as a quartz – molybdenite veinlet stockwork in hornfelsed sandstone. The mineralized zone extends for about 2 km in a northwest-southeast direction, is about 300 m wide, and is open at depth below 650 m. During 2007, 27 boreholes were completed totalling about 15 000 m, and also extensive IP and soil surveys. A formal resource estimate is expected to be released early in the New Year. One previous report (not NI 43-101 compliant) described a resource "...well in excess of 50 million tonnes with grade 0.072 to 0.096% Mo."

Conwest Explorations Inc undertook very extensive IP and 3D-IP surveys on an extensive area east of Knewstubb Lake, collectively referred-to as the **Fish** property, in the hope of identifying the geophysical signature of a porphyry system.

Figure 3.16. Jim Davis, Brian Grant and Sheila Jonnes examine Nithi Mountain core.

Goldmember Ventures Corp followed-up earlier work on epithermal gold-silver prospects with its **Nechako** and **Alexis** projects south of Nazko. Close to 250 line km of 3D-IP, were completed – three grids on Nechako and one on Alexis – and a mobile metal ion geochemical survey was initiated on Nechako.

PRINCE GEORGE AND MACKENZIE AREAS

Graymont Western Canada Inc undertook an extensive drilling program of about 7000 m – on a grid pattern with holes to about 300 m depths – to define a large, high-purity limestone deposit on its Pat group of claims about 8 km southeast of the community of Giscome (Figure 3.17). A much smaller program was completed at an alternate location near Hansard, a few kilometres to the northeast. The company's intent was to develop lime kilns at the community of Giscome, initially burning 600 000 tonnes/yr of limestone to produce 200 000 tonnes/yr of lime with production intended for 2010. Graymont had begun technology studies, environmental baseline studies, land agreements and consultations to move the project forward. In December 2007, however, the Company decided to suspend its consultation and environmental assessment process pending clarification of the provincial government's regulatory intent regarding the production of greenhouse gases (because significant amounts of CO_2 are generated in the production of lime).

Figure 3.17. Stromatoperoid boundstone in core from the Pat (Giscome) project (courtesy Graymont).

QUESNEL AND WELLS-BARKERVILLE AREAS

Richfield Ventures Corp delayed exploration activity on its **Mouse Mountain** alkalic porphyry copper-gold property, located about 5 km west of Quesnel, until late October and the completion of a planned amalgamation

with Oak Point Capital Corp. The property encompasses mineral occurrences distributed along a 1500 m, north-northwest trending area in which have been defined, from north to south, the Rainbow, Valentine and High-Grade zones. Disseminated and fracture-controlled pyrite and chalcopyrite mineralization is typical, with malachite and azurite in weakly to moderately potassic and silica-altered Nicola Group volcanic rocks. By year-end about 1000 m of a planned 5000 m drilling program had been completed, with the remainder to be drilled in 2008.

In the Wells-Barkerville area, International Wayside Gold Mines Ltd continued work on its **Bonanza Ledge** gold deposit, including the **Mucho Oro** zone along strike, on its **Cariboo Gold Quartz** property.

LIKELY - HORSEFLY AREA

Imperial Metals completed about 32 000 m of on-lease exploration drilling at its **Mount Polley** mine, supplementing geological mapping, trenching and a ground magnetic survey (Figure 3.18). The drilling focus was on the Pond, Skid, Green (beneath the Wight Pit) and Springer zones, and many of the results reported to date were encouraging. Hole PZ07-06 in the Pond zone returned 145.9 m grading 0.52% Cu, 0.31 g/t Au and 7.54 ppm Ag, raising the priority of the zone for a more intensive drilling campaign. In the Springer zone, hole SD07-20 intersected 454.2 m grading 0.44% Cu and 0.30 g/t Au, while other holes encountered higher grades over shorter distances. The drilling extended the Springer zone mineralization significantly to the south. Immediately to the north and east of the Mount Polley property, Valley High Ventures Ltd completed a drilling project on the **Boundary** and **Frypan** zones on its **Lloyd-Nordik** property.

Exploration to extend reserves at Cross Lake Minerals Ltd's **QR** mine, located near Likely just north of the Quesnel River, were ongoing in 2007. An exploration adit in the West zone was developed to about 400 m by year-end, and is to be followed by a fan-drilling program. Mineralization occurs in propylitically-altered basaltic fragmental rocks, primarily, of the Late Triassic Nicola Group associated with an Early Jurassic diorite stock.

Exploration at the **Spanish Mountain** bulk tonnage gold property of Skygold Ventures Ltd (70%) and Wildrose Resources Ltd (30%) continued at a high level. Gold mineralization is found as a "sediment-hosted vein" deposit in graphitic argillite-mudstone which has undergone complex deformation locally. During 2007, a long-term operations base was constructed just outside Likely, and about 120 drillholes comprising 26 000 m were completed on the Central Main and Placer zones (Figure 3.19). About 20 km of soil geochemistry was completed as well. In December 2007, Skygold and Wildrose agreed to a merger whereby Skygold would acquire a 100% interest in the property.

Just south of Quesnel Lake, NovaGold Resources Inc explored a porphyry-type target on its **Blue Lake** property, completing 2295 m of diamond drilling in 11 boreholes and 12 km of deep-sensing IP.

Fjordland Exploration Inc, with its 40% partner Cariboo Rose Resources Ltd, concentrated its 2007 activities on the **Megabuck zone** and the newly-discovered **Southeast zone** of its **Woodjam** copper-gold porphyry prospect, located about 10 km south of the village of Horsefly. Ten boreholes totalling about 3000 m (four in the Southeast Zone), and 100 km of IP exploration (which led to the discovery of the Southeast Zone), were completed. Results were favourable. Hole 07-73 in the Southeast zone, for example, returned values of 0.18% Cu and 0.0064% Mo over 243 m, including 0.27% Cu and 0.015% Mo over 86 m. The deposit remains open at depth. Mineralization is associated with a subvolcanic quartz monzonite intrusion, part of the Triassic-Early Jurassic Takomkane batholith.

Hawthorne Gold Corp continued work on its **Fraser gold** property, in respect of which it entered into an agreement to acquire up to 60% interest from Eureka

Figure 3.18. Core Storage at the Mount Polley mine site.

Figure 3.19. An example of drill pad reclamation at Spanish Mountain.

Resources Inc. The prospect is located about 65 km east of Horsefly, along strike from Spanish Mountain, and is an orogenic lode gold deposit hosted within intensely-deformed Quesnel River Group phyllite. Particulate gold is described as occurring primarily in quartz segregations of stringers, veins, boudins and mullions. The deposit has been known since the early 1980s (Figure 3.20), and in 1991 James Askew Associates estimated a resource on the property of 6 million tonnes of mineralized material grading 1.7 g/t Au. In 2007, Hawthorne completed about 5000 m of diamond drilling on the site, and about 1300 km of airborne geophysics.

Figure 3.20. Frasergold portal.

MCLEESE LAKE AREA

Near McLeese Lake, Taseko Mines Ltd conducted extensive on-lease exploration at its **Gibraltar** mine. Some 148 boreholes totalling 43 677 m were completed, further defining the mineralized zones. While the base has been found in the other pits, Gibraltar East remains open at depth. Details have not as yet been released.

Meanwhile Copper Ridge Explorations Inc completed a 13-hole, 3219 m program to the north of the Gibraltar mine on its **Copper Ace** property adjacent to the mine lease area. Eleven of these boreholes intersected what Copper Ridge described as "sericitically altered Mine Series Tonalite with locally anomalous structurally controlled intersections of copper, molybdenum, zinc and gold mineralization," the results being consistent with "the fringes of a larger body of possibly economic mineralization."

REGIONAL PROJECTS

In June 2007, Geoscience BC announced its QUEST (QUesnellia Exploration STrategy) project to stimulate exploration activity in the forested area hardest-hit by the mountain pine beetle epidemic, an area which also is characterized by extensive and thick overburden cover. This regional geophysics/geochemistry program covered some 40 000 square km of the Quesnel Terrane from Williams Lake to west of Mackenzie, and included airborne EM and gravity surveys, collection of 2000 lake and stream sediment samples and the re-analysis of 5000 previously-collected samples. By early January airborne and EM sampling programs were complete, and the airborne gravity survey was about 27% complete. EM results are expected to be made available in late January 2008, and the balance of the program in the spring or summer of 2008.

Fjordland Exploration Inc and Serengeti Resources Inc joined forces as equal partners to conduct a 70 000 line km airborne magnetic survey to coincide roughly with the Geoscience BC survey area and to provide supplementary information, specifically targeting 16 potential Cu-Au targets.

COAL EXPLORATION

Drilling and sampling on Westhawk Development Corp's **Groundhog** anthracite coal project, west of Thutade Lake, was suspended for 2007 while the company negotiated an agreement with First Nations with interests in the area and completed a NI 43-101 report on the property. That report was released in August, and identified a speculative coal resource of between 154 and 168 million tonnes.

OUTLOOK FOR 2008

The level of exploration activity in the Region is expected to remain high in the context of high metal prices. Even though exploration in the Kemess mine area probably will be much-reduced, a positive feasibility study for Terrane's Mount Milligan property will be a spur to exploration, and there are several highly prospective properties under development. Geoscience BC's QUEST project may identify new targets for grassroots exploration.

ACKNOWLEDGMENTS

The writer acknowledges with thanks the generosity of the Region's explorationists and mine staff in sharing information on their activities. The former Regional Geologist, Bob Lane, was invaluable for his memory and constructive suggestions.

SOUTH-CENTRAL REGION

By Bruce Madu, PGeo
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SUMMARY AND TRENDS

Exploration activity in South-Central BC increased dramatically in 2007 to approximately $84.4 million (Figure 4.1): an increase of almost double compared to 2006 and another record-setting total. There were some very large exploration programs in the region and several that were completing pre-feasibility and feasibility level studies that require large amounts of capital which is captured in these statistics as pre-production decision spending. Junior companies were responsible for virtually all of the region's investment which is an ongoing trend seen for many years now. Many companies continued to benefit from the confidence in the investment community which supported their ability to raise capital in various financings.

With current high metal prices numerous projects are under revamped exploration programs utilizing larger conceptual deposit geometries and new mining methodologies or realizing previously over-looked resources. These companies are primarily targeting bulk-mineable copper-gold, copper-molybdenum and molybdenum porphyry deposits, high-grade gold-silver veins, and stratiform polymetallic massive sulphide deposits.

Drilling activity was up substantially at about 330 000 m (Figure 4.2) an increase of 88% over 2006. The number of significant projects, *i.e.*, those with drilling or trenching and over $500 000 in spending or significant regional impact, is estimated at 33 *(For 2007, the threshold for measuring significant projects has been adjusted upward from the old benchmark of $100 000 owing to rising costs for exploration programs and a robust industry; therefore, comparison with previous years is not possible).*

The **New Afton** (copper-gold) project received a *Mines Act* permit on October 30 and is being advanced toward production sometime in late 2009. A positive feasibility study for **Prosperity** (copper-gold) project was completed and the project is continuing through the permitting process. Several projects are undergoing advanced exploration, pre-feasibility and feasibility level studies and could enter permitting processes in the near future. The most advanced are **Afton** (copper-gold) (Ajax, DM-Audra-Crescent), **Elk** (gold), **Blue River** (tantalum-niobium), **Copper Mountain** (copper-gold), **Harper Creek** (copper), **J&L** (zinc-lead-silver) and **Ruddock Creek** (zinc-lead-silver) projects.

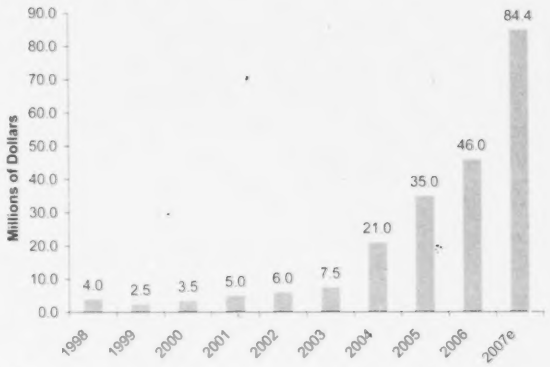

Figure 4.1. Annual exploration spending, in millions of dollars, South-Central Region.

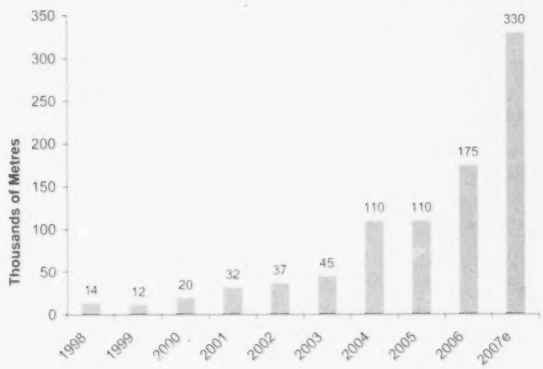

Figure 4.2. Annual exploration and development drilling, in thousands of metres, South-Central Region.

It was a particularly encouraging year for significant new discoveries, many of which are at existing properties but may be previously unknown zones or the result of new exploration concepts. These include: the U-Zone at the **Ruddock Creek** project, the BK Zone at the **Bralorne Mine** (gold), possible red bed-style mineralization at the **Chilanko** (copper) project, sub-thrust fault mineralization at the **Crazy Fox** (molybdenum-tungsten) project, deep mineralization at the **New Afton** project, the Peach 1 zone at the **Lac La Hache** (copper-gold) project, the Ridley Creek zone at the **Fox** (tungsten-molybdenum) property, new carbonatites at

Lower Gum and Switch Creek at the **Blue River** (tantalum-niobium) property and epithermal gold at the **Shovelnose** property.

Amongst the operating mines, the highlight of the year was the decision to extend the mine life to 2019 at **Highland Valley Copper**. This includes a major capital investment in pit expansion, equipment procurement and on site improvements.

All of the operating mines in the region are listed in Table 4.1 and shown on the map (Figure 4.3). In addition, the major exploration projects are listed in Table 4.2.

METALS

Highland Valley Copper, a partnership of Teck Cominco Ltd (97.5%) and Highmont Mining Company Ltd (2.5%), continued to be a highly profitable mine in light of onsite developments and elevated currency exchanges.

For the over 1000 employees of the operation, the February decision to extend the mine life from 2013 to 2019 was welcome news. The additional capital investment for this extension is reported to be $300 million and involves a push back of the west wall in the Valley pit, exploitation of other known resources on the property (Lornex and Highmont pits) as well as equipment and mill upgrades. The east wall push back on the Valley pit is well underway with overburden stripping to continue for the next 1-2 years (Figure 4.4). The in pit crushers and conveyors have been moved out of the Valley pit and now reside on its east rim. The companies invested an estimated $170 million this year as part of both the 2013 and 2019 mine life extensions.

TABLE 4.1. SOUTH-CENTRAL FORECAST MINE PRODUCTION 2007

Mine	Operator	Deposit Type / Commodity	Forecast Production in 2007 (tonnes or kilograms)	Number of Employees	Proven and Probable Reserves (at Jan. 1, 2006)
Metals					
Highland Valley Copper	Teck Cominco Ltd / Highmont Mining Company Ltd	Calc-alkalic porphyry Cu-Mo	142 000 Mt Cu, 1700 Mt Mo, minor Au and Ag	>1000	318 700 000 Mt at 0.43% Cu and 0.008% Mo
Coal					
Basin	Compliance Energy Corp	Thermal coal	0	On care and maintenance	
Industrial Minerals					
Ashcroft	IG Machine and Fiber Ltd (IKO Industries Ltd)	Basalt (roofing granules)	~350 000 Mt	55 (plant & quarry)	
Bud	Absorbent Products Ltd	Bentonite		see Red Lake	
Buse Lake	Lafarge Canada Inc	Volcanic ash (alumina-silica)		see Harper Ranch	
Craigmont	Craigmont Mines Joint Venture	Magnetite tailings	60 – 70 000 Mt	~30 (plant; seasonal)	
Decor	Pacific Bentonite Ltd	Alumina, landscape rock		~2 (including trucking)	
Falkland	Lafarge Canada Inc	Gypsum	6000 Mt	see Harper Ranch	
Harper Ranch	Lafarge Canada Inc	Limestone	~220 000 Mt	32 (plant & 3 quarries)	
Kettle Valley quarries	Kettle Valley Stone Company	Ashlar, flagstone, thin veneer		~40 (plant & quarries)	
Pavilion	Graymont Western Canada Inc	Limestone	190 000 Mt	~34 (plant & quarry)	
Red Lake	Absorbent Products Ltd	Diatomaceous earth, leonardite		40 (plant & 3 quarries)	
Z-2	Industrial Minerals Processors	Zeolite		~3 (plant and quarry; intermittent)	
Zeotech Bromley Creek	Heemskirk Canada Ltd	Zeolite			

Figure 4.3. Mines, quarries and major exploration projects, South-Central Region, 2007.

TABLE 4.2. MAJOR EXPLORATION PROJECTS, SOUTH-CENTRAL REGION, 2007

Property	Operator	MINFILE	Commodities	Deposit Type	Work Program
Afton Area (West Ajax, East Ajax, DM-Audra-Crescent)	Abacus Mining and Exploration Corp	092INE012, 013, 092INE028, 030, 026	Cu, Au, Ag, Pd	Alkalic Porphyry	DD (~30 000 m), EN, FS, MS, PF
Ajax / Magnum	New Gold Inc	092INE012, 013	Cu, Au	Alkalic Porphyry	DD (~8000 m)
Austruck-Bonanza	American Creek Resources Ltd		Au, Cu	Vein?	DD (3985 m)
Axe	Westar Resources Corp/ Bearclaw Capital Corp	092HNE143, 040, 142	Cu, Au, Ag	Alkalic Porphyry	DD (3200 m)
Blackdome Mine	J-Pacific Gold Inc	092O 053, 051, 052	Au, Ag	Epithermal Vein	DD (2080 m)
Blue River Tantalum/Niobium (Upper Fir)	Commerce Resources Corp	083D 005, 035	Ta, Nb	Carbonatite	MS, PF, DD (~6000 m), EN, G
Bralorne Camp (King, Shaft and BK veins)	Bralorne Gold Mines Ltd	092JNE164, 001	Au, Ag	Mesothermal Vein	DD (~3000 m)
Congress	Levon Resources Ltd	092JNE029, 131, 132, 133	Au, Ag, Cu, Sb	Mesothermal Vein	TR, P, DD (~5000 m)
Copper Mountain (Similco)	Copper Mountain Mining Corporation		Cu, Au	Porphyry	DD (51 000 m), PF
Crazy Fox	Newmac Resources Inc	092P 014, 015, 106	Mo, W	Porphyry	TR, DD (6900 m)
CrowRea / Empress	Goldrea Resource Corp / Molycor Gold Corp	092HNE138, 044	Mo	Vein; Porphyry	DD (~8500 m), TR
Dora (Clapperton, Spence, McKay, Stobart, Fame)	Appleton Exploration Inc		Au	Epithermal Vein	P, GC, G, GP, TR, DD (~1500 m)
Dot	Dot Resources Ltd	092ISE023, 019, 063, 156, 024	Cu	Porphyry	G, GP-IP, GP-MAG, DD (~3000 m)
Elizabeth	J-Pacific Gold Inc	092O 012	Au, Ag, Cu, Mo	Mesothermal Vein	DD (1725 m)
Elk (Siwash North)	Almaden Minerals Ltd	092HNE096	Au, Ag	Mesothermal Vein	DD (~2000 m), EN, PF
Empire (Bullion/Jamieson)	American Creek Resources Ltd		Au, Ag	Vein, porphyry	DD (1785 m)
Fox	Happy Creek Minerals Ltd	none	W, Mo, Zn, Au	Skarn	TR, DD (~2000 m), GC, G, P
Harper Creek	Yellowhead Mining Inc	082M 008, 009	Cu, Ag, Au, Zn, Mo	Stratiform disseminated	DD (~14 000 m), GP-IP, GC, G, MS
J & L	Merit Mining Corp	082M 003	Zn, Pb, Ag, Au	Stratiform/VMS	UG (~1000 m), DD (1363 m), UG-DD (~5000 m)

TABLE 4.2. CONTINUED

Property	Operator	MINFILE	Commodities	Deposit Type	Work Program
Jake	Island Arc Exploration Corporation/Rimfire Minerals Corp		Au	Mesothermal vein	GP-IP, TR, DD (~900 m)
Lac La Hache (Aurizon, Peach 1 Zones)	GWR Resources Inc	092P001, 002, 034, 035, 108, 120, 153	Cu, Au	Porphyry	TR, DD (20 000 m)
LJ	Venturex Explorations Inc	082M 264	Zn, Pb, Cu, Au, Ag	SEDEX / Besshi VMS	DD (2600 m), GC, P
New Afton	New Gold Inc	092INE023	Cu, Au, Pd, Ag	Alkalic Porphyry	DD (~15 000 m), UG, FS, EN
North Brenda	Bitteroot Resources Ltd		Cu, Mo, Au, Pb	Porphyry, vein?	DD (~3900 m); GP-IP, GC, P
Panorama Ridge	Goldcliff Resource Corp	082ESW052, 259	Au	Skarn	DD (2827 m), TR (1008 m)
Prime-Man	Candorado Operating Company Ltd		Cu, Au	Porphyry	DD (5000 m); GP-IP
Princeton Group	Anglo Canadian Uranium Corp	092HSE033	Cu, Au, Pd	Intrusive/Porphyry	DD (3000 m), IP
Prospect Valley	Consolidated Spire Ventures Ltd		Au, Ag	Epithermal Vein	DD (5000 m), TR, GC, GP
Prosperity	Taseko Mines Ltd	092O 041	Cu, Mo, Au	Porphyry	FS, BS, ES, DD (~2100 m), TR
Rain	International Bethlehem Mining Corp	082M 156	Cu, Mo, W, Pb, Zn	VMS/Besshi	DD (2133 m), GC, P
Ruddock Creek	Selkirk Metals Corp	082M 082, 083	Zn, Pb, Ag	Stratiform	DD (~12 000 m), UG (~1000 m), MS, EN
SBGD (Mag, LP, Silk, Southern Belle, Inn, Manning)	Strongbow Exploration Inc		Au, Ag	Epithermal Vein	GC, G, P
Skoonka (B4, B5, B6, Boothanie 1,2,3)	Anglo-Canadian Uranium Corp		Au	Epithermal Vein	GP-MG, GP-IP, GC, G, DD (2000 m)
Skoonka Creek (Deadwood, Backburn, Ember,JJ)	Strongbow Exploration Inc	092ISW104, 105	Au, Ag	Epithermal Vein	AB-MG-RD, GC,TR,GP,DD (3144 m)
Taseko Lake	Galore Resources Inc		Cu, Mo, Au, Ag	Porphyry	AB-EM,MG,G,P,GC, DD (~2400 m)

Work Program Abbreviations:
A = access; trail, road construction on claims; AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X tonnes) = bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (Xm) = diamond drilling totaling X metres; EN = environmental baseline studies monitoring, remediation work; FS = feasibility studies; G = geology, mapping, etc; GC = geochemical sampling (rock, soil, silt, etc); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; 3D-IP; MG = magnetics; MK = marketing-primarily for industrial mineral products; MS = metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; PP = Pilot plant, R = reclamation; RC = reverse circulation drilling; TR = trenching, UG (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

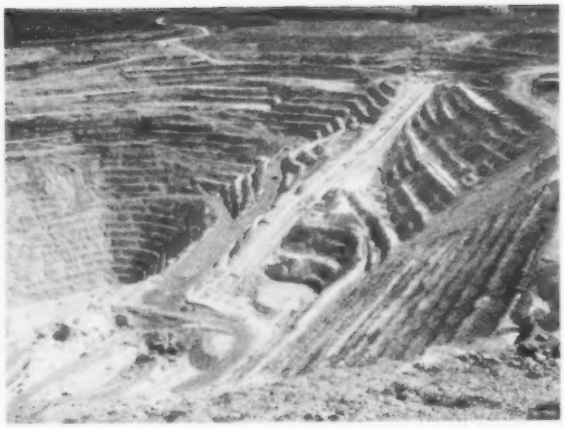

Figure 4.4. The Valley Pit at Highland Valley Copper showing trace of moved in pit conveyor and east wall overburden stripping.

Average daily mill throughput is estimated at around 112 000 tonnes/day or approximately 41 million tonnes for the year which is down roughly 10% from 2006. Copper production is estimated at 142 000 tonnes, a reduction of approximately 17% from 2006, and a reflection of the inclusion of lower grade ore from the Lornex and Highmont pits during the current push back and reduced mining at the Valley Pit. Molybdenum production is forecasted at around 1700 tonnes which is down around 14% from 2006. The mine also produces minor by-product gold and silver.

The proposed on site copper refinery was delayed indefinitely owing to an inconclusive feasibility study. The mine produces relatively clean concentrates and there was no obvious advantage to utilizing a process designed for less desirable concentrates at a growing capital cost of at least $500 million.

Several other mine-mill complexes remain on care-and-maintenance status. Many of these have been closed since the mid-1990s, awaiting higher metal prices and/or discovery of additional ore. They have permits and substantial infrastructure in place and represent excellent opportunities for renewed mining or custom milling. These complexes include the **Goldstream** copper-zinc, **Blackdome** gold-silver, **Bralorne** gold and **Similco** copper-gold mines. Efforts at bringing these mines back into production are discussed in latter sections.

COAL

Located near the town of Coalmont, the small **Basin** thermal coal mine of Compliance Energy Corporation was placed on seasonal care and maintenance status in September 2006 and did not operate in 2007. The high volatile, bituminous B and C rank coal is sold mainly to cement plants and other niche markets in southern BC. A stockpile of 4500 tonnes was sold to meet some contractual arrangements.

The company's subsidiary, Compliance Power Corporation, is studying options for its Princeton Power project which was to utilize coal from the Basin mine along with wood-waste to produce up to 56 megawatt of power. The company is reviewing this proposal in light of Government's vision for energy production as set out in the Energy Plan.

INDUSTRIAL MINERALS

There are more than fifteen industrial mineral quarries and processing plants employing over 250 people in the region. These operations provide stable jobs in many small to medium-sized communities including Kamloops, Kelowna, Lillooet, Cache Creek, Ashcroft, Princeton and Merritt. There are very good opportunities for additional growth in this sector due to the wide variety of rock types and deposits in the region, excellent transportation infrastructure, proximity to growing markets in western North America, and the relative ease of permitting.

The **Kamloops** cement plant and **Harper Ranch** limestone quarry of Lafarge Canada Inc continue to supply cement to meet due to strong demand in western Canada. Lafarge also draws materials from the **Falkland** and **Buse Lake** quarries, which provide gypsum and alumina-silica rock respectively.

The **Decor** pit of Pacific Bentonite Ltd supplies alumina-rich burnt shale to the Lafarge cement plant in Kamloops. The shale beds occur directly above the Hat Creek coal deposit, located west of Cache Creek. Although most of the material is sold to Lafarge, a few thousand tonnes were also sold for surfacing of baseball diamonds. The property is also known to host a large bentonite deposit which is being investigated for municipal engineering and tile manufacture applications.

Also near Cache Creek, Graymont Western Canada Inc operates the **Pavilion** limestone quarry and lime plant on the Pavilion Indian Reserve. Graymont has a forty-year lease with the Ts'kw'aylaxw First Nation who form the bulk of the employees at the mine.

East of Ashcroft, IG Machine and Fiber Ltd, a subsidiary of IKO Industries Ltd, operates the **Ashcroft** basalt quarry and roofing granule plant. The granules are sized and coated with one of several distinct colours on site, and then shipped by rail and truck to IKO asphalt shingle plants in Calgary, Alberta; Sumas, Washington; Chicago, Illinois and elsewhere in North America.

Craigmont Mines Joint Venture operates the **Craigmont** magnetite operation located near Merritt where tailings from the old Craigmont copper mine are processed. The plant normally operates on a seasonal basis (March to December), however, due to strong demand, processing may continue through the winter

months. The magnetite is used in coal washing plants in western Canada and the Centralia mine in Washington State. Remaining tailings are forecast to be exhausted within the next one to two years and the company is evaluating several other possible feed sources.

At its plant in Kamloops, Absorbent Products Ltd manufactures cat litter, barn deodorizer, industrial absorbents, and carriers for agricultural products. These are prepared from diatomaceous earth mined from the **Red Lake** quarry northwest of Kamloops, and bentonite mined from the **Bud** quarry at Princeton (Figure 4.5).

The **Z1** (Ranchlands) zeolite quarry near Cache Creek is a small intermittent producer. Heemskirk Canada Ltd continues to market agricultural and absorbent products, produced from stockpiled zeolite at its plant in Lethbridge, Alberta. Zeolite is also mined from the nearby **Z2** quarry by Industrial Mineral Processors, a private company based in Calgary. The plant produces industrial absorbents for oil field clean-up, soil conditioner, barn deodorizers, feed binders, and cat litter.

At Princeton, the **Zeo-Tech/Bromley Creek** zeolite quarry is operated by Heemskirk Canada Ltd who transport the material to Lethbridge and prepared for use as lightweight cement for oil and gas wells.

Opal Resources Canada Inc produces attractive fire opal gemstones and jewelry from the **Klinker** property, located west of Vernon. Opal occurs as fracture and vesicle-fillings in andesitic to basaltic laharic breccia of the basal Kamloops Group (Eocene). Presently the gemstone jewelry is marketed from a retail store in Vernon and is aimed at the BC tourist market; however, the company aims to develop other North American markets.

Decorative rock and dimension stone are produced at numerous small quarries throughout the region. The best known producer is the Kettle Valley Stone Company of Kelowna which sells flagstone, ashlar, facing stone and landscape rock mined from the **Nipple Mountain**, **Kettle Valley**, **Canyon** and **Gemini** quarries. Kettle Valley's workforce has grown to about 40 people year round, mainly employed in the Kelowna processing facility. The products include dacite ash, gneiss and basalt, and are mainly used in high-end residential and commercial developments in the western U.S.A. and in the Vancouver-Whistler area.

Figure 4.5. Bentonite near Princeton at the Bud Quarry of Absorbent Products Ltd.

South of Revelstoke, D.G. Olsson produces, by hand, small amounts of micaceous-quartzite flagstone and facing stone at the **Begbie** quarry. Other small, hand-operated flagstone quarries exploit micaceous quartzite in the North Thompson area.

EXPLORATION HIGHLIGHTS

KAMLOOPS - HIGHLAND VALLEY

Strong prices for copper, molybdenum and gold have focused exploration interest on the productive porphyry-hosting districts of southern BC, and in particular the Guichon Creek and Iron Mask batholiths.

Major exploration projects within the Iron Mask batholith are maturing into development projects and future mines. This second life of large-scale mining is generally sited at former producing deposits such as the Afton and Ajax mine but with rethought approaches such as new mining methods or increased economies of scale. These approaches have given new life to a prolific mineralized area that a decade ago was on the wane.

The most advanced project in the batholith, and the south central region, was the **New Afton** porphyry copper-gold project of New Gold Inc. New Afton is located on the northwestern end of the Iron Mask batholith and centered on the former Afton open-pit mine site, ten kilometres west of Kamloops. The year started aggressively with an application for a *Mines Act* permit in January followed by the completion of a feasibility study in April. Through the summer the company successfully raised enough capital to see the project through to production as set out in the feasibility study. In late October the company received a permit allowing it to proceed with mine construction and operation.

In the midst of all these activities the company has been successfully identifying new resources below those that are set out in the present mine plans. In 2006 the C-Zone was discovered which provided new potential resources below the main zone and in 2007 hole AF-125 passed through both zones into a new zone of mineralization which yield an intersection of 122 m grading 1.23% Cu and 1.01 g/t Au (Figure 4.6). These deep intersections have illuminated mineralization at the deposit at a depth of 1.3 kilometres below the surface and with an overall vertical extent of 1.1 kilometres.

New Gold Inc was also active in the central region of the Iron Mask batholith where they drilled around the

Figure 4.6. A deep hole of nearly 1.3 km at the New Afton mine. Alteration and mineralization continue to at least these depths.

Ajax pits and the **Magnum** property. A letter of intent signed in November with neighboring company Abacus Mining and Exploration Corp around the Ajax pits ensures the company will have access to underground mineral resources below a conceptual pit being contemplated by Abacus.

Abacus Mining and Exploration Corp are maintaining an aggressive rate of exploration at their large property holdings in the Iron Mask batholith. In the first quarter the company released results indicating the **Ajax West** deposit contained inferred mineral resources of 147 million tonnes grading 0.36% Cu and 0.22 g/t Au at a cut-off of 0.2% Cu. The company drilled the **Ajax East** deposit in support of defining a resource estimate in early 2008. The signing of letters of intent with New Gold Inc in November have enabled the company to expand its efforts in defining a larger mineral resource around the **Ajax West** and **East** deposits where previously the land base was fractured by separate titles held by the two companies. A drill program of up to 20 000 m has been proposed in the newly available exploration area aimed at providing the company with supporting data for a combined super pit with a potential strike length of 1.5 kilometres.

Abacus Mining and Exploration Corp continued to drill the **DM-Audra-Crescent Zone** which presently is open at depth and along strike. A recalculated resource for this zone is expected in early 2008.

North of Kamloops Lake, Candorado Operating Company Ltd flew a high resolution multi-parameter airborne geophysical survey over its **K-CR** property. This survey is contiguous to the 1995 survey area over the Afton camp and is intended to provide the company with a similar quality of data that has previously proven useful in defining exploration targets for follow-up within the Iron Mask batholith. Similarly, with funding from the Targeted Geoscience Initiative (**TGI-3**) the Geological Survey of Canada initiated a multi-parameter airborne geophysical survey over the immediate Kamloops area to provide southern coverage contiguous to the 2006 Bonaparte survey.

Near Roper and Dominic Lakes, west-southwest of Kamloops, Global Hunter Corp completed four confirmatory holes at the **Rabbit South** molybdenum porphyry property. Previous work outlined a horseshoe-shaped mineralized zone associated with quartz monzonite of the Roper Lake stock where it intruded andesites and basalts of the Nicola Group. The program was successful in confirming previous results at the property as demonstrated in hole DRL0701 which intersected 0.030% Mo over 207 m.

The **Galaxy** property held by Discovery-Corp Enterprises Inc is strategically located between the Afton and Ajax properties and contains an historical resource estimate of 3.2 million tonnes grading 0.65% Cu and 0.34 g/t Au. This year saw the company confirming the locations of the Bill Nye showings within their property and preparing for infill drilling to upgrade the resource estimate.

Exploration activity occurred throughout the year at the **Highland Valley Copper** mine, which is centred in the Guichon Creek batholith, where operator Teck Cominco Ltd drilled several targets aimed at supporting the expansion plans at the mine. Most of the work was around the **Highmont** pit but the company also did some drilling near the Iona pit on the **Bethlehem** property.

Just north of the Highland Valley mine, Getty Copper Inc announced the commencement of a pre-feasibility engineering study focused on potential cathode copper production at the **Getty North** and **Getty South** porphyry copper deposits. The study will focus on mining and treating or concentrating both oxide and sulphide resources with a finishing process of solvent extraction and electro-winning to produce cathode copper. The company is still engaged in evaluating the effectiveness of a proprietary Continuous Vat Leach technology for its oxide ore.

About 6 kilometres southeast of the Highland Valley mine, Happy Creek Minerals Ltd drilled for porphyry copper-molybdenum at the **Rateria** property. The program encountered bornite and chalcocite mineralization and hole R07-05 returned an assay of 134.0 m grading 0.16% Cu with an interval of 33 m containing 0.33% Cu. Further south in the Guichon batholith, Dot Resources Ltd undertook drilling at the **Dot** property to test targets identified in last year's geophysical program. Additional geophysical, geochemical and geological work was done on this property which contains the former producing Aberdeen Mine and Vimy showings. TNR Gold Corp drilled five targets at the **Tyner Lake** property is search of copper-molybdenum porphyry mineralization: results were disappointing.

Just outside of Merritt, Christopher James Gold Corp conducted another small drill program on the **Betty** claims located three kilometres west of the past producing

Craigmont copper mine. The objective was to test for Craigmont-style skarn mineralization at the contact between limestone rocks and the Guichon Creek batholith.

American Creek Resources Ltd started the year strong at the **Austruck-Bonanza** and **Empire (Jamieson-Bullion)** properties on its very large land holdings north of Kamloops on the southern Bonaparte plateau. This land package is underlain largely by Devonian to Triassic Harper Ranch and Upper Triassic Nicola Group rocks that have been intruded by Late Triassic to Jurassic granodiorite to quartz diorite plugs. Numerous targets were drill tested with mostly disappointing drill results leading the company to focus its efforts on other properties it holds pending evaluation of how to further test these properties' potential.

NORTH THOMPSON

Commerce Resources Corp continues to advance its Blue River tantalum and niobium project which is being studied as a potential producer of high technology metals. It has dramatically increased its land holdings south of Blue River to cover additional land with higher mineral potential and infrastructure needs if they proceed through to production. This year's focus was largely aimed at drilling the **Upper Fir** carbonatite which presently has an indicated resource of 8.6 million tonnes grading 208.2 g/t Ta_2O_5 and 1372.6 g/t Nb_2O_5 at a cut-off grade of 150 g/t Ta. Early reports suggest the drilling was successful in extending the Upper Fir in strike length to over 1100 m and some holes intersected the Bone Creek carbonatite confirming that both carbonatites are part of a larger continuous system. Two new carbonatite showings were discovered in 2007, the **Lower Gum Creek** and **Lower Switch Creek** which are both slated to receive more exploration. The company has expanded its environmental and community outreach programs this year in support of a proposed pre-feasibility study. Commerce Resources Corp undertook very successful financings again in 2007 and has significant capital available to aggressively advance this project.

Newmac Resources Inc drilled the **Crazy Fox (Anticlimax)** porphyry molybdenum-tungsten property north of Little Fort over two occasions this year. Previously, long intersections of mineralization suggested the potential for a large, low-grade bulk-mineable deposit; however, a thrust fault seemed to define the lower limits of the deposit by displacing the intrusive rocks. A hole was drilled in the fall to test if mineralization might be encountered in intrusive rocks of the footwall of the thrust in the southwestern portion of the known deposit. Hole CF07-41 passed through the thrust and into a lengthy section of mineralization within intrusive rock (Figure 4.7). Early reports indicate the mineralization appears to be more abundant than previous holes drilled on the property. Assay results for this hole are pending.

Figure 4.7. Strong molybdenite mineralization as both fracture filling and disseminations below the offsetting thrust fault at the Crazy Fox (Photo courtesy of Newmac Resources Inc).

At the **Harper Creek** copper deposit located 10 kilometres southwest of Vavenby, private company Yellowhead Mining Inc undertook a highly accelerated program. The deposit is comprised of tabular shaped zones of volcanogenic sulphide mineralization that are hosted within highly deformed Late Devonian metavolcanic rocks of the Eagle Bay assemblage. The company completed a third phase of drilling in the fall and commenced a fourth phase which is planned to entail 30 000 m of drilling when complete. A major milestone for the company was achieved in releasing a resource estimate for the deposit which includes an indicated resource of 450 million tonnes grading 0.323% Cu and an inferred resource of 142 million tonnes grading 0.326% Cu, both at a 0.2% Cu cut-off. The company is proceeding with baseline environmental and community consultation work as well as scoping studies which will lead to a proposed feasibility study in 2008. Additional targets are being defined on the property, particularly at the M-anomaly which is some 3 kilometres along strike to the east of the existing deposits and better defined by a recent induced polarization survey.

Partners Island Arc Exploration Corp and Rimfire Minerals Corporation were busy at the **Jake** property, a 2005 gold discovery by prospector Mo Kaufman, located west of Clearwater. At the property mineralization consists of quartz with pyrrhotite, chalcopyrite, pyrite and bismuthinite in veins and stingers hosted by sheared andesite tuffs of the Devonian to Permian Fennell Formation. Elevated copper and bismuth characterizes the geochemical signature of the mineralization. An induced polarization survey was completed which successfully delineated chargeability highs in the immediate vicinity of the discovery showing. Trenching of the anomalies was generally successful in reaching bedrock where auriferous sulphide-bearing veins were found. Around the Jake discovery 2007 sample results are reported to include 7.7 g/t Au over 2.8 m in a channel sample across the structure which included an interval of

19.3 g/t Au over 0.6 m. The "Jake Offset" which lies 300 m north of the discovery showing yielded an intersection of 12.5 g/t Au over 0.1 m in a trench that exposed narrow sulphide-bearing veins. A fall drilling program was conducted at the property with results pending.

CMC Metals Ltd trenched and drilled the **CK** property located northwest of Clearwater. This property boasts numerous mineralized occurrences of the Broken Hill-type and at the CK occurrence an historical resource of 1.643 million tonnes grading 8.6% Zn and 1.4% Pb is recorded. The company was focused on in fill drilling and trenching the New zone which has been traced over a strike length of 1300 m and to depths of over 100 m downdip.

West of Little Fort, Candorado Operating Company Ltd trenched and drilled the **Deer Lake** property in search of skarn and porphyry copper-gold mineralization. Grab samples from the properties have returned assay results that range from 2.75-3.8% Cu and 9.89-14.9 g/t Au.

On Samatosum Mountain, near the former Samatosum mine, Zab Resources Inc announced a drill program for the **Extra High** property. The company hopes to expand the K7 zone, a massive sulphide zone that has been defined over a strike length of 180 m and to a depth of 150 m with thickness on average of around 6 m.

Two new grassroots discoveries have been made by prospector David J. Piggin west of Adams Lake and north of the Samatosum mine. At the **Honeymoon** property mineralization is hosted in orthogneiss with nearby intrusive rocks and grab samples assayed up to 0.78 % Cu with 35.3 g/t Ag (quartz vein) and 0.86% Cu (sulphide mineralization). At the **Spapilem** property a quartz-magnetite vein within an intrusive hostrock assayed up to 6.01 g/t Au in the magnetite and up to 1.29 g/t Au in a quartz vein.

Sheffield Resources Ltd flew an airborne magnetic survey over the **Golden Loon** property just west of Little Fort. The company is pursuing nickel and cobalt mineralization within the Dum Lake Intrusive complex: a Triassic to Jurassic Alaskan-type ultramafic intrusive.

On the **Moore** property near East Barriere Lake, Almo Capital Corp proposed to follow up targets identified by a recent induced polarization survey with drilling. The target is VMS mineralization within metamorphosed andesite to rhyolite rock of the Eagle Bay Assemblage.

Kingsman Resources Inc trenched and drilled the **Luxor** property northeast of Barriere to expand on known molybdenum mineralization within intrusive rocks of the Baldy batholith.

SOUTHERN CARIBOO - CHILCOTIN

Exploration for porphyry copper-gold deposits was the focus of most work in the Cariboo-Chilcotin in 2007; however, programs around high-grade gold-silver veins provided much excitement in the region. Both the provincial and federal geological surveys were active in the region conducting geoscience programs aimed at bolstering exploration activity and off setting the impacts of the Mountain Pine Beetle on the area's economy (Figure 4.8). Explorationists should make themselves aware of the vast quantities of information gathered and released in 2006 and 2007 which should provide a significant step toward a better understanding of the mineral opportunities in this part of the province.

The most significant project in this area is the **Prosperity** porphyry gold-copper deposit of Taseko Mines Limited, located southwest of Williams Lake. The company has achieved some significant milestones this year: the upgrading of stated mineral resources and the completion of a feasibility study. In January the company reported the property contains 487 million tonnes of proven and probable reserves at 0.22% Cu and 0.43g/t Au. These reserves were incorporated into the September feasibility study which confirmed the projects viability in contemplating a 70 000 tonne per day mine over a 20 year mine life. A recent court decision on the status of aboriginal rights and title in the area has given the company more clear direction on how to develop the project with respect to the First Nations communities in the area.

At the **Taseko Lake** property, located 15 km south of the Prosperity projects, Galore Resources Inc completed a large airborne time-domain and magnetic survey. Follow-up drilling of porphyry copper, gold and molybdenum targets was started late in the fall. Nearby, Great Quest Metals Ltd drilled the Granite Creek and Empress areas at the **Taseko** property; a property that has seen little work since the early 1990s. The Empress area hosts an historical resource of 10 048 000 tonnes of 0.61% Cu and 0.79 g/t Au. Also nearby, Hi Ho Silver Resources Inc

Figure 4.8. Numerous geoscience activities are underway within the area affected by the Mountain Pine Beetle. Here a till sampling program is conducted by the Geological Survey of Canada on the Bonaparte Plateau.

completed an airborne geophysical survey over the **Tanen** property where in 1981 drillhole 81-2 intersected 288 m grading 0.28% Cu and 0.023% Mo (Figure 4.9).

Newmac Resources Inc was active on several of its properties on the Chilcotin Plateau. Near Bluff Lake, the company drilled the **Bluff** property where in 2006 high grade samples of copper mineralized quartz tourmaline breccia rubble were discovered and an induced polarization survey identified targets for follow up. Results have not been released for this program. At the **Chilanko** property located north of Tatla Lake, the company completed a winter IP program which successfully delineated strong response targets through a window in the Miocene age basalts which cover most of the plateau area. Subsequent trenching and drilling successfully intersected native copper, chalcocite and bornite mineralization that is reported to be similar to a red bed-style of deposition. Further drilling is planned over the winter to test a fault which may be a controlling influence on mineralization.

The **Blackdome** gold-silver mine and mill of J-Pacific Gold Inc is located northwest of Clinton and remains on care and maintenance. This underground mine operated in the 1980s and again briefly from October 1998 to May 1999. Mineralization consists of narrow, high-grade epithermal quartz veins. The 200 tonne-per-day mill is intact and the property has an historic inferred mineral resource of 124 120 tonnes grading 12.8 g/t Au and 33.7 g/t Ag. In 2007, the company resumed a program started last year aimed at testing the relationships between several of the former producing veins, particularly the No.'s 1 and 2 and other known veins such as the No. 17 vein. The company completed wide spaced drilling to test an area underneath Blackdome peak – a basalt cap rock that forms a prominent topographical high in the region (Figure 4.10). Success is reported in tracing a mineralized zone containing the No. 17 vein under and through the peak as well as confirming it does not appear to be a continuation of the No. 1 and 2 veins but rather a separate structure. Hole B07-15 returned an assay of 1.75 m of 5.73 g/t Au from the No. 17 vein and shows the potential for ore-bearing structures in an area of little previous exploration. Drilling the No. 1 and 2 veins at depth was also completed to test if the veins merge: only low grades of mineralization were encountered.

J-Pacific Gold Inc was also active at the **Elizabeth** property where the Southwest gold zone was drilled. The property is well known for bonanza-grade mesothermal veins within the Blue Creek diorite intrusions hosted in a broader environment of the ultramafic Shuliaps Complex. This year produced some exceptional results as is best shown in hole E07-43 which intersected 37.5 g/t Au over 11.2 m and 4 other intersections that ranged from 10.52-21.26 g/t Au over lengths of 1.15-4.33 m (Figure 4.11). Being located 30 kilometres away from the company's mill at the Blackdome mine creates opportunities for this property to produce mill feed in support of reopening of the mine.

Figure 4.9: Technicians at Aerospace International Ltd prepare the AeroTEM II for helicopter mounting and airborne EM and Magnetic surveys of the Tanen, Volcanoes and Pichlyn properties in the southern Chilcotin and Bralorne area (Photo courtesy of John Chapman).

Figure 4.10: Blackdome Peak with the Blackdome mine in foreground.

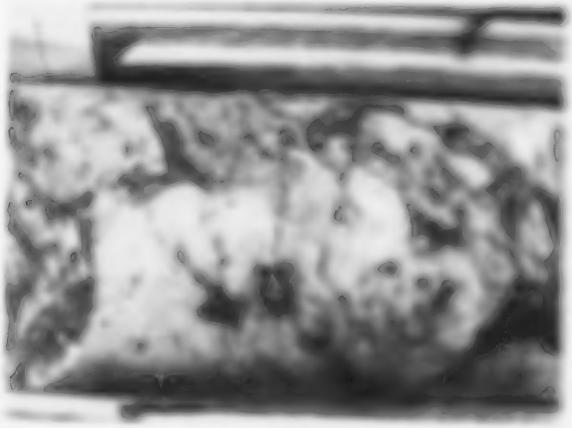

Figure 4.11: High-grade gold mineralization within quartz veins at the Elizabeth property of J-Pacific Gold Inc (Photo courtesy of J-Pacific Gold Inc).

Anglo-Canadian Uranium Corp drilled the **Stirrup** property located west of Clinton where epithermal gold-sulphide-quartz veins are hosted within marine sedimentary rocks of the Lower Cretaceous Jackass Mountain group. The program was designed to follow-up on previous drilling where hole 2005-2 yielded results as high as 17.19 g/t Au over 0.8 m and 9.75 g/t Au over 0.7 m.

At the **Lac La Hache** porphyry copper-gold property of GWR Resources Inc, much of this year's work was focused on exploring the Aurizon zone of the Ann property. Early in the year trenching successfully located surface mineralization as reported for trenches SH-A and SH-B which exposed 85 m of 0.27% Cu and 0.38 g/t Au and 33 m of 0.59% Cu and 3.64 g/t Au respectively. Drillholes under each trench have intersected lower grades of mineralization but do expand the overall extents of mineralization at the Aurizon zone. Another hole in the zone, AZ-07-21, was drilled to better define the geometry of the zone and yielded confirmation values of 90 m of 0.387% Cu and 0.61 g/t Au. In late fall the company reported that mineralization at the Aurizon zone has been traced over a distance of approximately 700 m. About 1 kilometre west of the Aurizon zone, the company reported a new discovery at the **Peach 1** property. Trenching on the property exposed low grade mineralization in a 65 m long trench that was subsequently drilled to test the mineralization at depth. Hole P07-01 did not encounter near surface mineralization but did intersect a deeper zone that yielded 86 m of 0.50% Cu and 0.42 g/t Au.

Happy Creek Minerals Ltd was active on their portfolio of properties in the south Cariboo region. Significant advances were made at the **Fox** property where field work is revealing what is reported to be large scale tungsten and molybdenum skarn mineralization beginning at the Nightcrawler and Discovery zone. Mineralization is reported to be related to the Deception granite intrusion, a roughly 106.4 million year old body that is slightly older than the Boss Mountain intrusive rocks located 30 kilometres to the west. Ten drillholes completed this year encountered mineralization over a strike length of 1.5 kilometres and in Ridley Creek, which is 4 kilometres to the north, positive soil and rock geochemistry is reported to have a very similar mineralization style. Adjacent to the Boss Mountain mine, the company continued to evaluate fracture-controlled and sheeted quartz veins within the Takomkane batholith at the **Silverboss** property. A 3000 m long molybdenum-tungsten-copper-in-soil anomaly was the target for a small fall drill program. The company also pursued alkalic porphyry mineralization at the **Hen** and **Hawk** properties located southeast of Boss Mountain.

Just north of Canim Lake, the Candorado Operating Company Ltd optioned the **Rayfield River** property and planned a late fall drill program. The property contains a window through the Miocene plateau basalts that form much of the Bonaparte Plateau and exposes volcanic and sedimentary arc sequences of the Nicola Group.

GOLD BRIDGE

The most advanced project in the famous Gold Bridge mesothermal gold-quartz vein camp is at the **Bralorne** mine of Bralorne Gold Mines Ltd which operated continuously from 1928 to 1971 and was the dominant contributor to the approximately 4.15 million ounces of gold that came from this camp. The mine received a Mine Development Certificate in 1995 and has completed some limited test milling in recent years. In addition to the underground workings, infrastructure on the property includes an assay lab, mine offices and dry, a partially completed tailings pond and a small gravity/flotation pilot mill with a capacity of about 100 tonne-per-day.

In 2007, the company focused on underground drilling to better characterize last year's bonanza-grade hole SB-06-109B that intersected 402.58 g/t Au over 0.34 m and 246.99 g/t Au over 0.37 m further downhole. This program has revealed that the intersected structure is likely a deeper extent of the King vein rather than the Shaft vein and will be explored in subsequent programs. The highlight of the program, after forty-one holes were completed, was the delineation of the newly discovered BK zone which contains high-grade mineralization and strong structure within a large unexplored gap between the King and Bralorne mines. The structure was explored over a horizontal length of approximately 275 m and over a vertical extent of 200 m. Intersections ranged in length from 0.6 to 5.5 m with grades from 2.74 to 86.08 g/t Au. The company has approved a substantial plan to develop a cross cut from existing workings through to the BK zone to test its potential for adding additional tonnage to the properties overall resources.

Covenant Resources Ltd flew an airborne EM-Magnetic survey over the **Piebiter** property located 6 kilometres southeast and along strike from many of the structural zones of the Bralorne camp. The property hosts numerous recorded mineral occurrences and a large multi-element soil anomaly that remains untested.

The **Congress** gold property of Levon Resources Ltd is located 11 kilometres north of the Bralorne mine and on the north side of Carpenter Lake. The property has had some mining and substantial exploration between 1913 and 1989 including six adits with over 2300 m of underground workings. Results from a late 2006 drill program at the **Golden Ledge**, **Lou**, and **Howard** zones were released with the best intersections ranging from 1 to 3 m and 6.41 to 10.7 g/t Au. Importantly the program extended the Lou zone structure by 500 m to the north and validated the Golden Ledge zone which was discovered in 2005. In 2007, a very active program culminated with drilling in the Gun Creek canyon where the nature of mineralization reportedly appears to be controlled by porphyry-style stockworks within intrusive rocks rather than veins as is typical on the property. Within this area **Gun's Gold Sill** was trenched and a rock chip sample returned a value of 3.104 g/t Au over 9 m.

The company also planned to drill northern extension of the Lou zone toward the newly discovered **Boo Coo** high-grade surface discovery where assay results from chip samples ranged from 0.19 to 27.68 g/t Au.

Near the Congress property, Avino Silver & Gold Mines Ltd drilled a few follow-up holes on the **Minto** property. The 2006 program yielded intersections of 0.25 to 0.9 m grading 1.04-7.58 g/t Au with one interval of 0.25 m grading 45.4 g/t Au from hole MO-06-01. No results have been released from 2007 drilling. East of the Congress property near Marshall Lake, Gray Rock Resources Ltd drilled the **Silver Stream** property to test gold-bearing shear zones uncovered in previous trenching programs.

FRASER RIVER - MERRITT - ASHCROFT

Several large programs were aimed at low-sulphidation epithermal gold-silver targets in the maturing Spences Bridge gold belt, located between Merritt, Spences Bridge and Lytton. Senior project geologist Larry Diakow of the BC Geological Survey has completed a second season of field research within Spences Bridge Group rocks and his insights into the genesis, history and mineral potential of this under explored belt will be of great interest to the exploration community (Figure 4.12).

The **Prospect Valley** property of Consolidated Spire Ventures Ltd continues to produce encouraging results. Located 30 kilometres west of Merritt, the company proposed an aggressive program aimed at exploring newly recognized zones around the known mineralization at the RM/RMX Zone. A spring airborne geophysical program kicked off the exploration season followed by a large trenching program at both the **Discovery South** and **Discovery North Zones**. Within the **Discovery South Zone**, a gold-mineralized stockwork zone has been identified that ranges from 50-90 m in width and up to 300 m in strike length. Some of the better assays from the trenching program yielded intervals such as 32.5 m of 0.82 g/t Au and 5.69 g/t Ag from trench 02-07. Drilling is currently underway at the property at both **Discovery South** and **North Zones** and at the **Dome Zone** as well: a recently discovered zone located 400 m north of the Discovery North Zone.

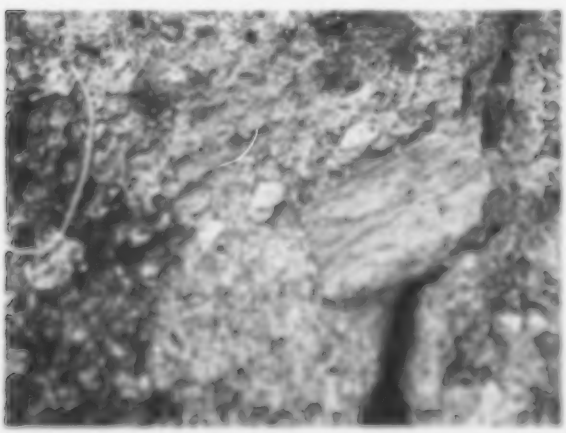

Figure 4.12. Ductile ash-flow tuff near the base of the Spences Bridge Group south of Merritt.

On the large **Skoonka Creek** project, Strongbow Exploration Inc focused on advancing several zones within the Discovery-Backburn trend to a point of readiness for drill testing. The trend is reported to be a 3000 m long east-west trending structural corridor within volcanic rocks defined by variable levels of clay and silica alteration and a coincident gold-in-soil anomaly. A total of thirteen holes were drilled with the majority of them at the **Deadwood** showing. The remaining holes were drilled at the **Backburn Central**, **Backburn East**, **Ember** and **JJ** showings. The company was also active on the **Ponderosa** property that it optioned from Almaden Minerals Ltd where in 2006 the Axel Ridge showing was hand trenched over a 77 m length to produce results that ranged from 1.5-2.8 g/t Au over intervals of 6.5-11.8 m. This year's program at the property started with ground geophysics, mapping and trenching and concluded with the drilling of six holes.

Strongbow Exploration Inc made several new discoveries at the **Shovelnose** property located 30 kilometres south of Merritt. Solid grass roots exploration including airborne geophysics, soil and rock geochemistry and prospecting discovered the **Mik** and **Line 6** showings located west of the **Tower** showing which was discovered in 2006. At the Mik showing three bedrock chip samples returned between 2.73 to 2.97 g/t Au over lengths of 3.0 to 3.75 m. Gold mineralization is reported to be epithermal-style and related to shallow to moderately west dipping colloform-banded quartz veins hosted silicified and clay altered felsic volcanic rocks.

Appleton Exploration Inc was active on the **Dora**, **Stobart** and **Fame** properties this season undertaking effective geochemistry, prospecting and trenching methods to identify zones favourable for low-sulphidation epithermal gold mineralization within Spences Bridge Group rocks. Other grassroots programs in the belt include: the **I.P.**, **Mag**, **Southern Belle** and **Goldpan** (Strongbow Exploration Inc), and the **Merit** and **Brookemere** (Williams Creek Exploration Ltd) properties.

Anglo-Canadian Uranium Corp advanced its **Skoonka (B4, B5, B6)** project to a drilling phase after identifying targets utilizing ground magnetic and IP surveys, prospecting and MMI soil sampling. Results from this late season program are pending.

Near Ashcroft Avalon Ventures Ltd flew an airborne electromagnetic survey at their **Red Hill** massive sulphide copper-zinc-silver property.

ASPEN GROVE - PRINCETON - KEREMEOS

This part of the region saw a dramatic rise is exploration activity mainly focused on porphyry copper-gold-molybdenum prospects. Anchoring this area is the **Similco** (Copper Mountain-Ingerbelle) copper-gold mine at Princeton which has been on care and maintenance since 1996. Starting early in the year Copper Mountain Mining Corporation embarked on one of the Province's largest drilling campaigns at the **Copper Mountain** project with the intention of confirming known resources and expanding those resources through the saddle zones between Pits 1, 2 and 3. Drilling through to late summer supported a restatement of the property's global resources to include measured and indicated resources of 205.9 million tonnes grading 0.37% Cu and inferred resources of 178.9 million tonnes grading 0.31% Cu using a 0.2% Cu cut-off. The company has contracted a proprietary deep penetrating multi-parameter geophysical survey to enlighten the subsurface geological structure and potentially identify further mineralization. Ongoing drilling at the project is intended to allow further evaluation of the property's resources and the commissioning of a feasibility study.

Approximately 12 kilometres south of Princeton and five kilometres south of the Ingerbelle Mine, Anglo-Canadian Uranium Corp continued drilling the **Princeton Copper** project to test the contact of the Copper Mountain intrusions with Nicola Group volcanic and sedimentary rocks for copper-gold-palladium mineralization. At the Friday Creek showing a late 2006 program intersected 6.08 m of 1.494% Cu in hole DDH-12 and drilling was completed on several other geophysical anomalies identified in a recent survey. A second target called the Rico zone is described as a bedded exhalite that grades into fine sediments and chert of the Nicola Group. A massive section of pyrrhotite mineralization near the exhalite yielded a 1.5 m chip sample that ran 2.025% Cu and 11.18 g/t Au. The Rico was also drilled this summer.

Weststar Resources Corp is continuing its exploration at the **Axe** porphyry copper-gold prospect located 20 kilometres north of Princeton. Historic resources total 39.0 million tonnes grading 0.38% Cu (indicated) plus 32 million tonnes of 0.38% Cu (inferred). Much of the drilling is focused on expanding the West Zone and testing the mineralization at depth and for the presence of higher-grade gold-bearing sections. One of the better intersections reported includes 288 m of 0.27% Cu and 0.14 g/t Au in hole M07-06, one of the longest interceptions of mineralization ever reported from the property. Skarn-style mineralization is also reported from the property and evidenced in hole M07-09 which returned an intercept of 10.5 m of 1.55% Cu and 0.85 g/t Au in a zone of massive chalcopyrite and magnetite mineralization.

South of the Axe property Candorado Operating Company Ltd. optioned the **Woo Prime** property and completed an IP survey and drilling program. Exploring for porphyry copper-gold mineralization within rocks of the Nicola Group, this program yield encouraging results such as 120 m of 0.21% Cu and 0.92 g/t Au in hole 694-008. Also north of the Axe and near Kentucky Lake, Bold Ventures Inc drilled near several historical showings including the Tom Cat, Bunker Hill, Bluey and AR at the **Kentucky Lake** property. East of Kentucky Lake, Victory Resources Corporation drilled the **TOE** property to test copper-zinc-gold MMI soil anomalies where they coincide with previously identified geophysical targets.

Goldcliff Resources Corp has been continuously active for several years at the **Panorama Ridge** gold skarn project a few kilometres east of the historic Nickel Plate gold mine at Hedley. The property has numerous showings with wide zones of near-surface low-grade gold mineralization which are effectively explored by trenching and drilling. Initial results from over a kilometre worth of trenching indicates the two most developed zones, the Nordic and York-Viking zones, remain open for further expansion. The majority of the analytical results are pending; however, early results such as 18.7 m at 2.15 g/t Au from trench ND142 are confirming good potential for expansion of known mineralization. Late in the year the company reported discovering bonanza-grades in continuous channel samples in the southwestern portion of the York-Viking zone. Two samples ran 525.0 and 168.0 g/t Au over 1.0 and 1.5 m respectively.

Southwest of the village of Tulameen, along the Tulameen River, Huldra Silver Inc continues to propose a mine at the **Treasure Mountain** vein silver-lead-zinc project that would see 33 000 tonnes mined over an eight month period each year. Historical resources at the property are reported to be 133 000 tonnes grading 870 g/t Ag, 4.5% Pb and 5.3% Zn.

OKANAGAN - SOUTHERN MONASHEES

Porphyry molybdenum deposits and gold-quartz vein deposits were the main exploration targets in the Okanagan in 2007.

Almaden Minerals Ltd was active at the **[illegible]** (Siwash North) mesothermal gold-quartz vein project 45 kilometres southeast of Merritt, and just 2 kilometres south of Highway 97. This year the company focused on the collection of baseline environmental and social economic data in support of the putting the mine back into commercial production. Additional drilling was completed to infill and step out in areas of known mineralization on the Siwash and WD vein packages. The company completed an internal scoping study of the potential for open pit and underground as well as onsite mineral processing.

Partners Mohican Gold Corp and Goldrea Resources Corp were active at the **Crowflea** and **Empress** properties west of Summerland. The Crowflea property

was discovered by Goldrea in 1995. It has been described as a mineralized aplite dike containing an historical resource of approximately 500 000 tonnes grading 0.19% Mo in the Webb Zone. The companies drilled the property to confirm this resource and expand it if possible with an overall intention of attaining a bulk sample to allow planning for small-scale mining of the mineralized body. Results from the first phase of drilling show the dike is continuous for over 650 m; however, grades vary due to pinching and swelling of the mineralization. Significant assays from this program range from 0.15-0.60 m grading between 0.046 to 1% Mo. At the Empress property the companies are drilling porphyry targets within granodiorite to monzonite intrusive rocks of the Osprey Lake batholith.

Jasper Mining Corp proposed a late season drill program at the **Isintok** molybdenum-copper-silver prospect, located southwest of Summerland. Previous work has reportedly confirmed near surface, consistent low-grade porphyry mineralization that was previously drilled by Anaconda Canada Exploration Ltd and Canex Aerial Exploration Ltd.

Just 1100 m to the north of the former Brenda mine, Bitteroot Resources Ltd drilled the **North Brenda** property in two campaigns. The Brenda mine operated from 1970 to 1990 and produced 276 227 tonnes of copper and 67 928 tonnes of molybdenum. Hole NB06-01 was drilled only to 60.3 m depth and returned an intersection of 28.8 m grading 0.0095% Mo and 0.03% Cu.

At the **Barnes Creek** property, located near the Monashee Pass and 70 kilometres southeast of Vernon, Columbia Yukon Explorations Inc drilled several promising gold-arsenic anomalies at the Holmes Lake gold zone. Despite a history of placer gold mining, this area has had little bedrock exploration. Results have yet to be reported.

REVELSTOKE - SHUSWAP - NORTHERN MONASHEES

This area is best known for its stratiform base-metal deposits hosted in cover sequences of the Monashee Complex. The deposits in this area have many characteristics of "Broken Hill-type" deposits although some more closely resemble classic Besshi and sedex deposits.

International Bethlehem Mining Corporation through a wholly owned subsidiary owns the **Goldstream** copper-zinc mine-mill complex north of Revelstoke. Its custom mineral processing plant lies in the heart of this mineralized region with a 1360 dry metric tons per day capacity to process off-site mineral deposits as well. This year the company completed a 100 hole program at the mill's tailings pond to ascertain the thickness of grades of known zinc and copper within the pond. Average hole length into the sediments was reported to be around 6 m and the majority of the holes returned assay results of greater than 1.5% Zn with a lesser number of greater than 2% Zn. The company plans to perform more detailed drilling in higher grade areas and then proceed with an evaluation of the economic viability of processing the tailings. Nearby the company was active on the **Rain** property, one of several properties known collectively as the Big Bend Metals project, where it drill tested geophysical and geochemical anomalies thought to be correlative to the mine section at the Goldstream Mine.

Selkirk Metals Corp continued a very aggressive program at the **Ruddock Creek** property located within the Script Ranges about 100 kilometres north of Revelstoke. The company has begun an exploration decline aimed at underground drilling and engineering studies of the E-Zone (Figure 4.13). Collared in early September, the 1000 m decline will undercut the western portions of the E-Zone and should be completed by the second quarter of 2008. The decline will allow the company to effectively delineate the zone at some of its deeper extents and permit drilling through the winter months. Much of this year's surface drilling was focused on other zones along the Ruddock Creek sulphide horizon which stretches in excess of 5 kilometres in strike length. The Creek Zone, which was discovered in 2006, was tested by wide spaced holes aimed at significantly expanding its extents. The company has reported very encouraging results from this campaign indicating the mineralization style and character is very similar to the E-Zone. The decline will also provide underground drilling opportunities for the Creek Zone. At the westernmost extents of the Ruddock Creek sulphide horizon and in the Oliver Creek Valley, the Q-Zone was drilled and realized an intersection of 5.32 m of 6.18% Zn and 1.36% Pb in hole RD-Q-2. Further work appears warranted in this area despite the more challenging drilling conditions.

The Ruddock Creek sulphide horizon is reported to be an increasingly predictable host of significant massive sulphide mineralization. Zones which have been recognized on or near the surface are now being shown to have consistent and predictable behaviour at depth. In 2007 the company drilled the U-Zone surface showings to reveal new mineralization at depth which is reflected in results such as 7.7 m of 21.48% Zn and 2.5% Pb in hole RD-07-U2. Furthermore, the recognition by the company of multiple horizons of mineralization in some the recently drilled zones are thought to reflect proximity to the source of mineralizing solutions for the greater sulphide-bearing horizon.

Ventures Explorations Inc was active at the **LJ** property located 35 kilometres north of Revelstoke and completed twelve drillholes at the Carnes Creek showing. The holes were testing what is reported to be Sedex-style mineralization hosted in the limbs and hinge of a reclined synformal fold. Early reports indicate the mineralized horizon was encountered in all the holes of the program. Results are pending with regard to assays and new

Figure 4.13. Portal to permit year round drilling of the E-Zone and Creek Zone at the Ruddock Creek property of Selkirk Metals Corp (Photo courtesy of Selkirk Metals Corp).

structural interpretations. Some holes also cut zones of skarn and disseminated mineralization, the significance of which is yet to be understood.

Just east of the LJ property is the **J & L** property where Merit Mining Corp has quickly established an aggressive program to advance this developed prospect through to feasibility studies. The J&L is gold-silver-lead-zinc stratiform deposit with an historical combined resource of 3.607 million tonnes of 7.24 g/t Au, 81 g/t Ag, 3.0% Pb and 3.93% Zn from the Main Zone and 1.03 million tonnes of 52.5 g/t Ag, 2.47% Pb and 7.09% Zn from the Yellowjacket Zone. The company has established an all weather camp to allow it work through the winter on underground development that will include 1000 m of cross cutting and 5000 m of underground drilling. A pre-feasibility study is underway as are environmental and baseline studies.

OUTLOOK FOR 2008

The varied geology of the south-central region hosts many favorable environments for exploration including porphyry, high-grade vein and stratiform deposits. The area has been fortunate to have numerous highly motivated junior companies providing sizeable budgets to evaluate some of the high quality deposits in the region. The New Afton project should be well into construction with much of the costly work out of sight in the preparation of the underground development. The Prosperity project should benefit from recent clarifications on the rights and title First Nations communities have in that region. Feasibility studies are anticipated from the Afton (Ajax) project, Copper Mountain, Harper Creek and the J&L projects with the Blue River, Elk and Ruddock Creek projects not far behind. The Bralorne, Blackdome and Goldstream mines should have a busy year again in their quests to identify more resources and re-open.

Overall exploration spending for this region may decline slightly in 2008 owing to some very large field projects and feasibility studies being completed and projects moving into development (*e.g.* New Afton). With companies still holding on to portions of budgets that went unspent in 2007 it is challenging to predict where these might be allocated for next year

The Ministry's Regional Geologists will continue to deliver outreach activities to area communities, governments and at any venue that would benefit from a better understanding of their regions mineral resources and opportunities (Figure 4.14).

Figure 4.14. Expanding outreach activities of Regional Geologists are extending geoscience to many First Nation communities in BC.

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SOUTHWEST REGION

By Bruce Northcote, PGeo
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SUMMARY AND TRENDS

The Myra Falls copper-zinc-gold and silver mine, Quinsam thermal coal mine, the major limestone quarries at Gillies Bay, Blubber Bay and Van Anda on Texada Island as well as a large number of aggregate pits and quarries contributed significantly to the region's economy in 2007. The outlook for 2008 and beyond is positive with strong demand for all these products.

A number of large infrastructure projects in BC and in the northwestern United States are increasingly important in maintaining demand for concrete and aggregates. In response, a new sand and gravel super quarry located near Port McNeill, Orca, opened in 2007 and is ramping up production. Quinsam Coal and limestone producer Texada Quarrying are closely linked to Lower Mainland and US Pacific Northwest cement manufacturers. More generally, proximity to the Province's main population centres and major transportation routes, including coastal shipping routes, are important to the viability of producers of low unit-value commodities. The use of relatively economical tidewater transportation methods to move these commodities to coastal markets and Hawaii is a long term trend that continued in 2007.

High commodity prices have led to an increase in metals exploration in the southwest in recent years. The exploration spending forecast for 2007 is $13 million, a ten-year high (Figure 5.1). The estimated total metres drilled also shows a marked increase (Figure 5.2). The most active exploration areas in the southwest region have seen previous advanced-stage exploration projects, and in some cases, production. Common themes are deeper drilling, more extensive exploration under overburden, exploration in areas where logging has opened road access and exposures, and even where glaciers have receded.

The projects with the largest expenditures were at Myra Falls, Hushamu copper-gold porphyry, Mineral Creek / Big Southeaster gold projects and precious metal enriched skarn exploration at the site of the former Merry Widow iron and Old Sport copper mines.

Mineral exploration in the region has generally focused on Vancouver Island and the Harrison Lake area. The main areas of interests were the Vancouver Island copper trend north of Rupert Inlet, northern Vancouver Island skarn mineralization, Tertiary intrusion-related mineralization, Sicker Group volcanic-hosted mineralization and varied targets around Harrison Lake. In the Hozameen trend the focus was on the Giant Copper prospect again this year.

More than 260 notices of work have been filed in the southwest in the 3 years ending in 2007. Over 40% were for sand and gravel. Only 1-2% were for placer work. In 2007 alone, at least 91 notices had been recorded as of early December, 38 of which are for sand and gravel, 53 for mineral exploration. None is for placer. Vancouver Island and the southern mainland have been the focus of most of the region's work.

Current major producing mine and quarry locations in the Southwest Region are shown on Figure 5.3 and basic data concerning these sites are listed in Table 5.1.

METAL PRODUCTION

The Myra Falls operations of NVI Mining Ltd (a subsidiary of Breakwater Resources Ltd) are located at the site of a number of volcanic-hosted massive sulphide

Figure 5.1. Exploration expenditures in Southwest British Columbia.

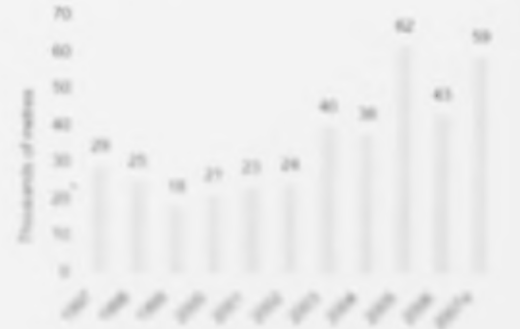

Figure 5.2. Exploration drilling in Southwest British Columbia.

deposits hosted by the Paleozoic Sicker Group, exposed in the Buttle Lake Uplift, one of a number of fault-bounded exposures of Sicker Group rocks on Vancouver Island. The deposits are polymetallic massive sulphide ore dominated by sphalerite, rich in zinc, copper, silver and gold and include disseminated sulphides and zoned pyritic massive sulphide and stringer sulphide zones (Figure 5.4). Despite more than 100 years of prospecting and mine production beginning at the site in 1966, this mining camp has a continuing history of exploration success, and there is as yet little indication of significantly diminishing returns on exploration investment. There are currently two mines operating at the site: the Battle-Gap and the H-W.

In the first three quarters of 2007, Myra Falls operations milled 544 420 tonnes of ore, slightly less than the same period last year. A final figure for 2007 is estimated to be approximately 744 000 tonnes. As of December 31, 2006, proven and probable reserves stood at 6.134 million tonnes of 5.7% Zn, 1.0% Cu, 1.2 g/t Au, 41 g/t Ag.

Figure 5.4. Ore clast breccia, H-W mine, Myra Falls.

Although some resources are currently directed toward development and ongoing exploration activities,

Figure 5.3. Locations of mines, major quarries and exploration projects in Southwest British Columbia, 2007.

TABLE 5.1. PRODUCING MINES AND QUARRIES, SOUTHWEST REGION, 2007

Mine / Quarry Operator	Location / community	Commodities	Forecast production in 2006	Employment -person years	Reserves as of January 1, 2006
Myra Falls NVI Mining Ltd (Breakwater Resources Ltd)	Campbell River	Zn-Cu-Au-Ag	744 400 t of 4.9% Zn, 1.1% Cu, 1.3 g/t Au, 46 g/t Ag	410	6.1 Mt at 5.7% Zn, 1.0% Cu, 1.2 g/t Au, 41 g/t Ag (prov+prob)
Quinsam Quinsam Coal Corp (Hillsborough Resources Ltd)	Campbell River	Thermal coal	472 000 t clean coal	91	24.1 million tonnes (in situ proven and probable)
Apple Bay (PEM 100) Electra Gold Ltd	Northern Van Island	Geyserite	122 000 t	6	5 million t
Benson Lake Imasco Minerals Inc	Northwest Van Island	Limestone	40 000 t	4	100+ years
Blubber Bay Ash Grove Cement Corp	Texada Island	Limestone aggregate, dolomitic lst	1 million t	16	100+ years
Gillies Bay Texada Quarrying Ltd (Lafarge Canada Inc)	Texada Island	Limestone, lst aggregate	6.7 million t	112	100+ years
Van Anda Imperial Limestone Company Ltd (JA Jack & Sons Inc)	Texada Island	Limestone	255 000 t	10	50 years
Monteith Bay Lehigh Northwest Cement Ltd	Northwest Van Island	Geyserite	Care and maintenance 2007		
Mount Meager Great Pacific Pumice Ltd	Pemberton	Pumice	Care and maintenance 2007		100+ years
Sumas Mtn Clayburn Industries Ltd and cement manufacturer partners	Abbotsford	Clay, shale and sandstone	~ 500 000 t	10-20	~70 years

Note: Blubber Bay and Gillies Bay produce limestone for both industrial mineral applications and aggregates - other large aggregate only operations are not included in this table.

Breakwater hopes to move ore production closer to its mill throughput capacity of 1.4 million tonnes as ventilation and hauling capacity issues are dealt with. Exploration and development are ongoing, with a $3.7 million 2007 budget for exploration and over $18 million in development expenditures during the first three quarters of the year.

Concentrates are trucked to port facilities at Campbell River.

COAL PRODUCTION

Coal resources at Quinsam mine are hosted by members of the Comox Formation. The mine is currently an underground room and pillar operation and produces a high volatile, low sulphur coal sold for thermal applications. The majority goes to Lower Mainland and US Pacific Northwest cement plants. Quinsam also supplies international customers in Asia, Central and South America. Coal is trucked to a barge loading facility at Middlepoint and delivered by barge to local customers or reloaded onto freighters at a nearby deep water port facility for international customers.

Hillsborough Resources Limited's December 31, 2007 production forecast for the Quinsam Coal mine is 715 000 tonnes run-of-mine yielding 472 000 tonnes clean coal. Production difficulties occurred due to adverse weather conditions early in the first quarter and mechanical and ground difficulties beginning in the second. A recent financing should allow plant

improvement and upgrades aimed at improving recoveries. The base case target for 2008 is 630 000 tonnes clean coal from the current underground mine. Additional production from other sources is under consideration and some development work to that end occurred in 2007. Mining was to commence at 2 South Pit at the time of writing.

In situ proven and probable reserves as of December 31, 2006 were 24.093 million tonnes of thermal coal. Measured and indicated resources were estimated at 5.810 million tonnes.

INDUSTRIAL MINERAL QUARRIES

Texada Quarrying Ltd expects to produce and ship approximately 6.7 million tonnes in total in 2007 from its quarry near **Gillies Bay**. Most of this (4.9 million tonnes) is limestone, principally for cement manufacture at two Lower Mainland plants, two Seattle-area plants and one in Northern California. Dikes are mined selectively and the igneous rock is used as aggregate of various sizes from ¼" minus to boulders. About 1.8 million tonnes were shipped as aggregate products. Recently the quarry has been supplying rock of various sizes to the Delta Port expansion at Roberts Bank. Aggregate markets beyond the Lower Mainland include Bellingham, Seattle area, California, Alaska, Hawaii and Mexico. The quarry has a loadout facility capable of accommodating Panamax class freighters.

Ash Grove Cement Company's **Blubber Bay** quarry can produce several carbonate products including aggregates, cement grade limestone, chemical grade limestone, agricultural lime and dolomite. In 2007 they expect to produce approximately 1 million tonnes, mostly aggregate, principally to shipped to the Lower Mainland market. Current loading facilities accommodate barges up to 17 500 tonnes, but the possibility of upgrading the facilities to accommodate freighters exists. Their dolomite product (~16.75% MgO) is used primarily for agricultural purposes and is shipped to Portland Oregon. In total approximately 100 000 tonnes goes of their products go to the US.

Imperial Limestone Company Ltd expects 2007 production at their Texada quarry near **Van Anda** to be very similar to last year's, about 255 000 tonnes. The majority (~95%) of their product is barged to parent company J.A. Jack and Sons Inc in Seattle where it is dried, crushed and screened. The product is a chemical grade limestone and is generally not used for cement or aggregate. End uses include agriculture and manufacturing of glass, plastic, roofing and other building materials. Products are marketed throughout the Pacific Northwest.

Clayburn Industries Ltd expects production at **Vernon Mountain** to remain approximately the same as previous years at roughly 500 000 tonnes, 85% of which is shale supplied to cement manufacturers. True fireclay (refractory clay) is also mined at Sumas Mountain. Approximately 15% of Clayburn's product is this high quality material used in the manufacture of refractory products, manufactured, marketed and installed by Clayburn Refractories Ltd.

Sumas Clay Products Ltd, owned and operated by the Sumas Mountain first nation manufactures and markets a colourful range of facebrick and paving products made from **Sumas Mountain** clay. The company specializes in custom orders. Clients are both local and international.

Electra Gold Ltd's **Apple Bay** or **Pem 100** operation appears on track to deliver over 120 000 tonnes of chalky geyserite to Ash Grove Cement in 2007 (Figure 5.5). In addition, a bulk sample was shipped to Lafarge for testing purposes. Construction of an access road to another nearby deposit began in late 2007 and the company recently upgraded its barge loading facility.

Imasco Minerals Inc has been operating a limestone quarry at **Benson Lake** since 1985. In 2007 it is expected to produce 40 000 tonnes of high brightness carbonate. About half finds industrial application as filler in paint and plastic products. It is also used in Imasco's line of stucco products.

Lehigh Northwest Cement's quarry at **Monteith Bay** had no 2007 production. The quarry supplies a high silica product for cement manufacture on a seasonal basis and does not operate every year (Figure 5.6).

An accident halted production at Great Pacific Pumice Inc's **Mount Meager** quarry mid-year. The operation is currently under care and maintenance. Garibaldi Aggregates Ltd also quarries pumice in the area and is currently preparing an application for a mining lease. Pumice finds application as light weight fill and in specialty concrete, among other uses (Figure 5.7).

AGGREGATES

Aggregate-only operations, natural sand and gravel as well as increasingly, crushed rock products, represent the

Figure 5.6. Pemberton Hills. Silica caps overlying hydrothermal systems resist erosion.

Figure 5.7. Mount Meager and Plinth Peak. The adjacent buried vent is the probable source of economic pumice deposits.

largest part of the southwest's mining sector by value of production, although they represent the lowest unit value commodities. In addition to availability of high quality materials, the proximity to Lower Mainland and Southern Vancouver Island markets as well as access to tidewater for shipping purposes make this possible.

Housing starts aside, infrastructure projects in southwestern BC and the western United States, notably California will continue to require raw materials as the current cycle of repair and improvement continues.

As noted above, two of the limestone quarries on Texada Island produce aggregates, in the case of Blubber Bay, primarily aggregate since it stopped shipping to Ashgrove cement plant in 2004. Construction Aggregates Ltd's **Sechelt Pit** is BC's largest producer of Sand and Gravel in 2007 with a projected 5.7 million tonnes, up from last year. Production is expected to be up further in 2008 as Construction Aggregates' Producers Pit closes. Producers Pit will produce 1.9 million tonnes in 2007, its final year.

Cox Station Quarry, operated by Mainland Sand and Gravel Limited produces a crushed quartz diorite aggregate on the north side of Saanich Mountain. In recent years, production has been close to 2 million tonnes per year, with an estimated 2.2 million in 2008. Material is shipped down the Fraser River on barges. Mainland also barges dredged river sand to Gateway Project sites such as Golden Ears Bridge.

Among the other large producers is **Eagle Creek** (Allegra North American consistently sell over 1 million tonnes in recent years. **Pipeline Road** operations of Jack Cewe Ltd and Allard Contractors Ltd together will probably produce more than 1 million tonnes in 2007 (Figure 5.8).

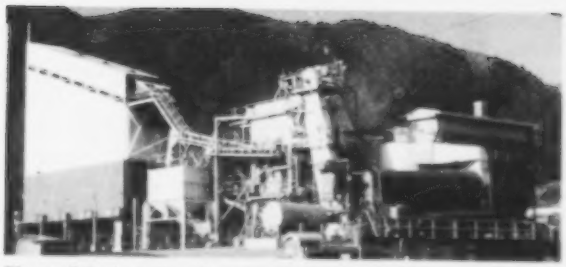

Figure 5.8. Jack Cewe's aggregate processing plant at Pipeline Road, Coquitlam.

Polaris Minerals Corporation's **Orca** Sand and Gravel began stockpiling in late 2006 and made its first shipments in early 2007. Production is expected to be over 1.5 million tonnes in 2007. This emerging super quarry shares some key features with the Sechelt pit – clean, high quality sand and gravel products, large capacity, large reserves and ability to accommodate self-unloading freighters at its loadout facility.

Polaris plans to ramp up production to more than 6 million tonnes per year over time. They also anticipate a feasibility study on their proposed **Eagle Rock** operation on Alberni Inlet, which would supply a crushed granitic aggregate product. It is currently permitted and has a 681.9 million tonne resource. Although they also supply Canadian customers, Polaris' business model has specifically targeted the California market. Like the other operations with freighter loadout facilities, they have supplied customers in Hawaii as well. Shipments to Washington and Oregon are anticipated.

A long term trend toward use of crushed rock aggregate products is evident. Major producers include Cox Station, Gillies Bay and Blubber Bay. In addition there are a number of smaller quarries such as Watts Point. Eagle Rock is another potential super quarry under consideration by Polaris Minerals Corporation.

The value of aggregate production in the southwestern region is conservatively estimated at roughly $200 million in 2007.

Dimension Stone, Landscaping and Decorative Stone

Dimension Stone, Landscaping and Decorative stone quarrying are a smaller part of the region's economy, but nonetheless are the basis of several successful businesses. Local granite, typically quartz diorite or granodiorite in various salt and pepper grey colours does not compete well with more exotic imported colours from Brazil, for example. Consequently local production is generally low. Bucking this trend is the historic **Nanaimo Island** Quarry, with about 4000 tonnes quarried this year, sold through Redrock Granite Sales Ltd. The company also markets **Darlington Island** Sedimentary (Breccia), another stone found in local architecture dating back more than 100 years. The recently completed Art Jules memorial in

Stanley Park is constructed of Haddington Island stone (Figure 5.9).

Other notable stone producers include **K2** Stone Quarries Ltd. They produce an attractive green meta-siltstone with slaty partings. The quarry is located near Port Renfrew and the main yard at Duke Point near Nanaimo. Several smaller operators are test marketing Port Renfrew area slates, or quarrying at a small scale.

Also on Vancouver Island, Matrix Marble and Stone, based in Duncan, quarry and finish products made of local marble. Three colours are available from their Vancouver Island quarries: **Black Carmanah**, **Tlupana Blue** and **Island White** (Figure 5.D). Apart from their showroom, examples of the stone can be found at Wall Centre in Vancouver.

Quaternary volcanics are quarried along the Whistler corridor for landscaping and masonry purposes. Columns and slabs of Garibaldi basalt, andesite and dacite can be found decorating many local gardens, but are also finding markets farther afield. Quarriers include Huckleberry Stone Supply Ltd and Corridor Masonry Corp.

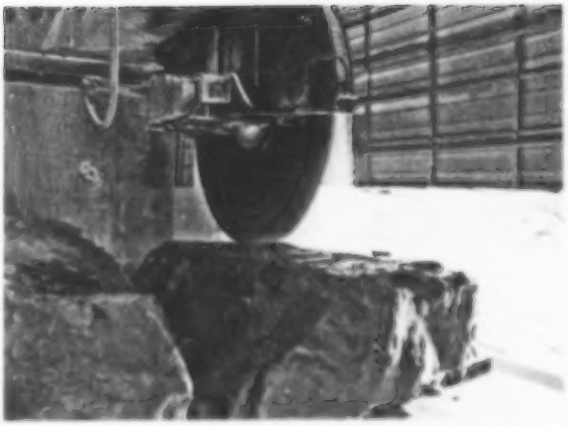

Figure 5.9. A piece of Haddington Island under the 11 foot saw at Bedrock Granite Sales Ltd.

OTHER MINERAL PRODUCTS

Other mineral products are quarried or collected periodically in southwestern BC. For example, the numerous iron skarns in the area have periodically supplied magnetite for washing coal, or for specialty concrete for radiation shielding. Coastal BC has a few rare deposits of extremely fine glacial clay suitable for medical and cosmetic purposes. Carrie Cove Clay and Precision Laboratories Ltd are among the local marketers of this material, quarried intermittently.

Figure 5.10. Bathroom by Matrix Marble using Vancouver Island White.

EXPLORATION

South Vancouver Island

Grande Portage Resources Inc has assembled an extensive land package in northern Vancouver Island comprising the Merry Widow Mountain area and properties along a south-easterly trend to Tahsis. Targets of the current exploration campaigns are precious metal enriched skarn and spatially associated, possibly Tertiary, mesothermal veins.

The core of the **Merry Widow** Property encompasses several past producers, i.e. the **Merry Widow** (MINFILE 092L 044), **Kingfisher** (MINFILE 092L 047) and **Harwin** (MINFILE 092L 046) magnetite skarn deposits as well as the **Old Spain** (MINFILE 092L 035) and **Benson Lake** (MINFILE 092L 094) mines which produced copper, iron, silver and gold for the Old Spain Horizon in the 1960s and early 1970s (Juras, T. [illegible]).

Figure 5.11. Skarn assemblage at Merry Widow zone at outcrop scale. Massive clinopyroxene under the hammer.

A series of 2007 drills tests a roughly north-south

trending string of massive sulphide occurrences crossing the sites of historical iron mining. At a 0.5 g/t Au cut-off, a preliminary resource estimate included 950 000 t in the measured and indicated categories averaging 2.03 g/t Au, 5.64 g/t Ag, 0.34% Cu, 0.013% Co and 16.1% Fe. An additional 120 000 tonnes in the inferred category averages 1.2 g/t Au, 2.8 g/t Ag, 0.13% Cu and 0.008% Co.

Seven holes targeted the Old Sport horizon at depth, but difficult ground conditions for diamond drilling may favour re-entry of the Old Sport underground workings as a base for further exploration. Baseline water sampling was initiated late this year with a view to determining the feasibility of dewatering the workings.

At the time of writing, a drill program is underway at the **Teihoum River** (MINFILE 092L 350) property on the south western flank of Merry Widow Mountain. Teihoum River is a gold prospect under option from Silver Fields Resources Inc. which conducted a 2004-05 program on the property.

At least some of the gold-enriched massive sulphide mineralization with retrograde skarn alteration in the Merry Widow Mountain area is suspected to be Tertiary in age.

The **Cherry** (MINFILE 092E 024) claims to the southwest saw an IP survey, silt and soil sampling in 2007. Mapping, sampling and prospecting were also carried out on the **Streator Gold** (MINFILE 092L 100) property, recently optioned by Grande Portage. The company has also acquired additional ground in the Tahsis area containing known magnetite occurrences. Prospecting and sampling will focus on precious metals enriched occurrences similar to targets to the north.

[illegible] Merry Widow and Old Sport, [illegible] Copper skarn with past production in the **Yreka** (MINFILE 092L 052, 104, 336), also seeing some renewed interest this year with Lucky Strike Resources Ltd signing an option agreement and initiating preliminary exploration. Historically, significant silver and some gold was recovered in addition to copper. Still further west, Homegold Resources Ltd conducted a soil sampling program near **LeMare Lake** (MINFILE 092L 329, 329).

A discovery of skarn mineralization by Bear [illegible] in [illegible] (MINFILE 092L 005) is being investigated by International Bethlehem Mining Corp. [illegible] mineralization is known in the area, [illegible] with consist of skarn sediment sampling, blagging, geophysics and trenching are expected to follow, with further work dependent upon results.

The area of the **Hushamu** (MINFILE 092L 240, 241, 476) deposit itself has seen extensive exploration for copper gold and molybdenum since 1966, when Utah Construction and Mining discovered and began developing the **Island Copper** (MINFILE 092L 036) deposit.

Hushamu saw little activity in 2006, but work resumed in early 2007. Western Copper Corporation completed a 4300 m drill program on the Hushamu Property, focused on the **NW Expo** area near the north western extent of their Hushamu Block, which covers a number of mineral occurrences in the Island Copper Trend north of Rupert Inlet. The 2007 work indicated continuity of separate molybdenum-gold and gold-copper-molybdenum zones. Drilling at NW Expo did not affect the existing Hushamu resource, but represents a separate target which could possibly be developed in conjunction with the existing resource at the Hushamu Zone. Western Copper is reviewing results and no further exploration of development plans had been announced at the time of writing. The current NI 43-101 resource stands as follows at 0.2% Cu cut-off:

Measured + Indicated 230.9 million tonnes at 0.28% Cu, 0.309 g/t Au

Inferred 52.8 million tonnes at 0.28% Cu, 0.377 g/t Au

Molybdenum mineralization is contained within the deposit, however as was the case at Giant Copper, historical assay data are insufficient to permit an NI 43-101 compliant resource calculation for that element.

Homegold Resources Ltd did some trenching at **Caledonia** (MINFILE 092L 004, 209), where there is a small underground development dating back to the 1920s. Historical samples return significant silver, copper, lead and zinc values. The Caledonia prospect appears to be a skarn. Drilling is proposed.

Mid-Island

[illegible] Resources Ltd is conducting a major exploration project at **Myra Falls** (MINFILE 092F 071, 072, 073, 336) with a 2007 budget of $5.7 million. The objective is to identify further resources, ultimately adding to reserves and extending mine life at the already long-lived producer, soon to enter its forty second year. [illegible]'s stated goal is to extend mine life by ten years at each of its operations. At Myra Falls, significant work to this end began in 2006 and continued through 2007 with diamond drilling and surface geophysical work in addition to underground exploration headings (classed as development expenditures). To date, results and many details of the work have not been released, but past exploration efforts have generally met with success.

[illegible] (MINFILE 092F 339) 2007 exploration and development work is probably best characterized as the latter aimed at near term production increases. Nevertheless, Bowmaster Limited expects to follow [illegible] exploration at Quatsino [illegible] with drilling and feasibility study in 2008. A 140 000 tonne bulk sample is planned at 7 levels.

The **Bonanza** (MINFILE 092F 078, 131) and **Big Interlake** (MINFILE 092F 078, 201) assets [illegible]

gold projects are adjacent with separate historic workings located within approximately two kilometres of one another. Although managed as separate projects, both are operated by Bitterroot Resources Ltd. Bitterroot's partner at Mineral Creek is Mineral Creek Ventures Inc. The Mineral Creek fault extends across both properties.

A portal was collared on the **Lower Linda** vein. At the time of writing approximately 200 tonnes of material had been extracted as a bulk sample. A permit is in place allowing up to 5000 tonnes. Work is expected to continue as weather conditions permit.

Big Southeaster was the target of extensive diamond drilling in 2007 with 10 782 m in 38 holes.

In addition to completion of the bulk sampling program, further drilling is anticipated on both Big Southeaster and Mineral Creek in the coming year. Most results were not available at time of writing, but one hole in the Mineral Creek fault zone, BTT-BR-9, returned 82 separate intervals greater than 0.2 g/t throughout most of its 243 m length.

Compliance Energy Corporation followed a substantial 2006 program at **Raven Coal** (MINFILE 092F 313) with a NI 43-101 resource estimate and preliminary economic assessment. The company has recent begun to exercise a purchase option on Comox Basin coal rights including Raven. In situ high volatile bituminous coal resources are estimated at just over 39 million tonnes measured and indicated and 58 million tonnes inferred.

There has been no recent field work reported at the **Lara** (MINFILE 092B [illegible]) property of Laramide Resources Ltd, however review of historical data resulted in a NI 43-101 compliant resource estimate for the volcanogenic base and precious metal deposit of 1.93 million tonnes combined indicated and inferred categories. Laramide plans to spin off its non-uranium assets including Lara into a separate company, NovaGold Co. Like Myra Falls and Mineral Creek area projects, Lara is hosted by Sicker Group volcanic rocks, in this case exposed in the Cowichan Lake area.

Powell River

The **OK**, or **Okeover** (MINFILE 092K 008, 057) property is a porphyry copper-molybdenum deposit located northeast of Powell River. Originally staked by Robert Wahlis in 1967, the property's mineral tenures have been maintained since that time and the property has been the subject of several significant exploration campaigns. Prophecy Resource Corp is conducting the current program.

In total there has been approximately 30 000 m of drilling recorded on the property, with over 2000 m likely to be completed by Prophecy by the end of 2007. A November 2006 NI 43-101 compliant estimate of inferred resources is 96.9 million tonnes averaging 0.33% Cu, 0.018% Mo, at a cut-off of 0.20% Cu. The **South Breccia** Zone (MINFILE 092K 008) hosts the current resource estimate. Recent step out drilling in the there suggests potential to expand this resource to the east.

Roughly bisecting the property are eight identified zones of copper and molybdenum mineralization along a 9 km north-south trend. Late 2007 drilling is testing the **South Breccia** Zone (MINFILE 092K 057), not part of the 2006 resource and not previously subject of intensive drilling (Figure 5.10).

OK is somewhat unusual among BC's porphyry deposits, at least those approaching economic proportions, in that it is located within the Coast Plutonic Complex. Country rocks are granitoids, probably of mid-Cretaceous age. The mineralizing phase is thought to be part of the OK complex, largely quartz diorite and including a leucocratic phase(s) and a crowded quartz feldspar porphyry. Post-mineral intrusives are also present. In view of 2007 results, future work is likely.

Nearby examples of porphyry style Cu-Mo mineralization to the east include **Mt. Mars** (MINFILE 092F 292) and **Don** (MINFILE 092K 106). The Don was to be subject of drilling by Denison Resources Ltd in 2007, but that program was been deferred pending an archaeological investigation and other preliminary work.

Hecate Lake – Northern Cascades

Within the northern Cascades there are several Mo showings generally thought to be of the low-fluorine or quartz monzonite porphyry type. **Solid Creek** (MINFILE 092JW 005) saw minor work by Piggot Resources Corporation, however the **Crouch Molly** Project (MINFILE 092JW/072) of Pacific Cascades Minerals Inc was subject of a 9 hole helicopter-supported diamond drill program.

Molybdenite is known at the location in veins, breccias and disseminations at surface but the property had not been previously drilled. The fifth hole was particularly encouraging. CMD7-05 intersected 195.05 m

Figure 5.10: "Bullseye" at the South Breccia Zone, OK property.

of average 0.053% Mo. The first five holes were drilled at the eastern margins of a high-chargeability zone believed to extend to depth. Four of the five intersected significant Mo mineralization. The company plans further testing of the geophysical target, ideally with a drill rig capable of reaching several hundred metres depth.

Gem (MINFILE 092ISW#001), located 13 km to the southeast has seen some surface work in recent years, though none is reported this year. That property has a historical resource.

There was a detailed magnetometer survey over the **Big Nic** in 2007, followed by 5 short drillholes in this area of limited exposure. Pacific Coast Nickel Corp has acquired claims to the southeast and plans to begin a winter program. Big Nic is located approximately 5 km southwest of **Giant Copper** (MINFILE 092ISW#125) a past nickel producer. A few kilometres to the northwest, International Millennium Mining Corp carried out a program of sampling and geophysics on the **Bacon** claims (MINFILE 092ISW#076), identifying a source of 2004 platinum-steam sediment anomalies.

Imperial Metals Corporation continued drilling at **Giant Copper** (MINFILE 092ISW#001, 002, 027, 047) this year with two holes testing the **SW Breccia** zone (MINFILE 092ISW#001). Giant Copper porphyry-related mineralization lies immediately east of the Hecate Fault and is apparently associated with small, mid to late-Tertiary diorite to granodiorite stocks intruding Upper Jurassic to Lower Cretaceous clastic and volcaniclastic rocks.

Late 2007 work included construction of a camp and two diamond-drill holes totalling 2164 feet (659.6 m) with the program expected to continue in spring. Testing of the SW Breccia Zone in 2006 demonstrated that the breccia extends deeper than previously known and intercepted significant mineralization.

GE 5606-01 intersected a 296.7 m interval grading 0.53% Cu, 0.20 g/t Au, 13.46 g/t Ag, 0.027% Mo. Hole GE 5606-02 completed to a depth of 969.4 m intersected a 602.0 m interval grading 0.30% Cu, 0.15 g/t Au, 11.72 g/t Ag from 200.1 m to 802.1 m. True widths are approximately 25% of drilled intervals.

The Giant Copper property was first staked in 1936 and is at an advanced stage of exploration. Historically, there has been more than 22 000 m of drilling and approximately 4 km of underground workings. It was subject of a positive 1969 feasibility study and the SW zone was the subject of a 1987 (prior to National Instrument 43-101) resource estimate. Historically, Mo was not routinely assayed.

Carat Exploration Inc completed a significant drill program in 2007 at the **Seneca** property (MINFILE 092ISW#013), west of Harrison Lake. There were several encouraging intercepts in the program located on the Wasco Lake area, east of the historic Seneca polymetallic VMS deposit. The company's plans for future work are unknown, although they consider the property worthy of further work.

Centurion Minerals Ltd also carried out a 881.29 m diamond drill program west of Harrison Lake on the **Three Oaks** claims (MINFILE 092ISW#185). While there were mineralized intercepts and some indications of an environment permissible for VMS mineralization, there were no intersections considered potentially economic and the company will not pursue further work at the property.

There has been no new work reported at Mo Gold Property at Harrison Lake since 2005, however Copper Canyon Resources Ltd announced an option agreement with Egali Resources Inc, suggesting a resumption of exploration in the near future. The property has a NI 43-101 compliant resource of 1.665 million tonnes grading 2.79 g/t Au indicated and 0.6 million tonne grading 2.9 g/t Au inferred.

Central Coast

The **Red Bird** Project (MINFILE 093E 026), operated by Coast Rivet Resources Ltd represents another reactivated advanced-stage property. Limited work at Haven Lake near Owendenoit Park, in recent years it has been covered in the north western section of this publication, but it is actually located on the southern side of the drainage divide marking the boundary between mining regions.

Red Bird is a molybdenum prospect, with porphyry style mineralization related to an Eocene quartz monzonite porphyry stock intruding volcanic rocks of the Kasalka Group. An August 2007 updated resource estimate using a 0.03% Mo cut-off gave an indicated resource of 63 000 000 tonnes at 0.064% Mo and an inferred resource of 78 000 000 tonnes at 0.058% Mo.

The 2007 program consisted of six diamond-drill holes on the Main Zone Western Extension totalling 2640.95 m of core drilling. Assays indicate potential for an economic thickness hypothesis associated with the molybdenum.

OIL EXPLORATION, 2007–2008

A demand for control and appropriate common zoning, or various continuing multi-year infrastructure projects suggest a steady stage of the southwest's producers' efforts to produce to benefit. Continued high production levels at the largest quarries and pits are expected. Once Suchell Pit, Quintette Coal have added investment to increase production in the coming year. Meadowvale Resources has raised similar intentions for its Wyo Coals Operations with recent progress toward that goal.

With molybdenum prices holding relatively firm at the time of writing, our continuing interest in the

porphyry and Cu-Mo porphyry prospects in the region is expected. For example, encouraging results at the Crack project should encourage further testing of the target. Further North, Torch River Resources has indicated an intention to continue drilling Red Bird in 2008.

Results from the South Breccia zone at OK are pending, but earlier 2007 drilling suggests the northern resource could grow significantly with further work.

Imperial Metals has indicated an intention to complete their program at Giant Copper.

Bitterroot Resources plans a continuation of work at Mineral Creek and Big Southeaster.

Upgrades and development are set to continue at Quinsam Coal. A recent financing is to fund this effort.

Grande Portage Resources has a number of targets on Northern Vancouver Island of continuing interest. Among these is the Old Sport horizon. A rehabilitation of underground workings is proposed.

In addition, there are a number of developed properties for which 2008 plans are as yet unknown. Among these are Hushamu, Seneca, Lara and Raven Coal. Each of these is reported by their operators and consultants to be worthy of further exploration and/or development. Many more projects remain in planning stages or in preliminary consultations with stakeholders. Others are, as always, contingent upon financing. Among these will be 2008s new and reactivated exploration projects.

ACKNOWLEDGMENTS

Thanks to all who generously shared their time, knowledge and information. The author looks forward to speaking with you again in 2008 and meeting more members of the exploration and mining community around the region. Thanks also to Dave Lefebure for his help in editing this manuscript.

KOOTENAY REGION

By David Grieve, PGeo
Regional Geologist, Cranbrook

SUMMARY AND TRENDS

This has been a banner year for exploration and development in the Kootenay (southeast) Region of British Columbia. Roca Mining Inc's MAX molybdenum mine at Trout Lake began production and shipping in the fall of 2007. The MAX is the province's first new metal mine in a decade, and is the first metal mine to be operating in the Kootenays since the permanent closure of the Sullivan mine at Kimberley in late 2001.

Exploration expenditures in 2007 are projected to be about $43 million, close to triple the level of the previous year (Figure 6.1). The portion of the total devoted to metals exploration was about 84%; the remainder was for coal (14%) and industrial minerals (2%).

An estimated 151 000 m of exploration drilling was carried out in the Kootenay Region in 2007, more than double the 2006 total (Figure 6.2). Of this total, 65% represented drilling for metals, 34% was for coal (not including mine in-pit drilling) and 1% for industrial minerals.

As in previous years, past-producing mines and camps were sites of active exploration. These included the Beaverdell, Rossland, Greenwood, Ymir, Lardeau, Salmo and Moyie areas. Several drilling programs continued into the late fall and some were still active at the time of writing. In combination with large workloads at analytical labs, this meant that for many programs assay results had not been received.

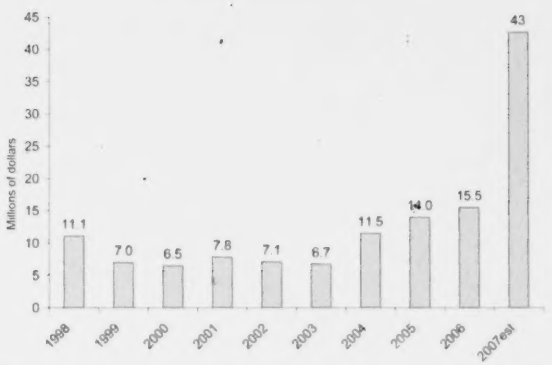

Figure 6.1 Annual exploration spending, in millions of dollars, Kootenay Region.

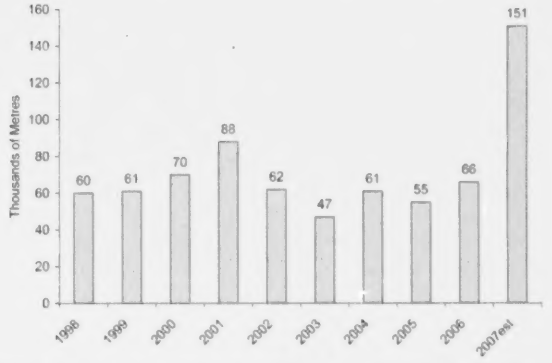

Figure 6.2. Annual exploration drilling, in thousands of metres, Kootenay Region. Note that prior to 2004 coal definition (in-pit) drilling at operating coal mines was included in the total.

OPERATING MINES AND QUARRIES

Current major producing mine and quarry locations in the Kootenay Region are shown on Figure 6.3 and basic data concerning these sites are listed in Table 6.1.

METALS

Roca Mines Inc's brand-new **MAX** molybdenum mine (MINFILE 082KNW003 and 004) began production in October 2007 and began shipping concentrate in November. The MAX is an underground mine with a production rate of 500 tonnes per day on a campaigned basis, for an annual production rate of 72 000 tonnes. Its on-site concentrator has a 1000 tonnes-per-day capacity.

The MAX molybdenum mine is near the community of Trout Lake. The project has been in construction throughout 2006 and 2007 after receiving its Small Mine permit in late 2005. Major accomplishments in 2007 included completion of the mill and tailings facilities, and significant underground development. A second adit, which will lower operating costs and improve ventilation, is under construction.

The MAX deposit contains measured and indicated resources of 42.9 million tonnes grading 0.20% MoS_2 using a 0.10% cut-off. The first phase of production will focus on a high-grade zone containing 280 000 tonnes (measured plus indicated) grading 1.95% MoS_2.

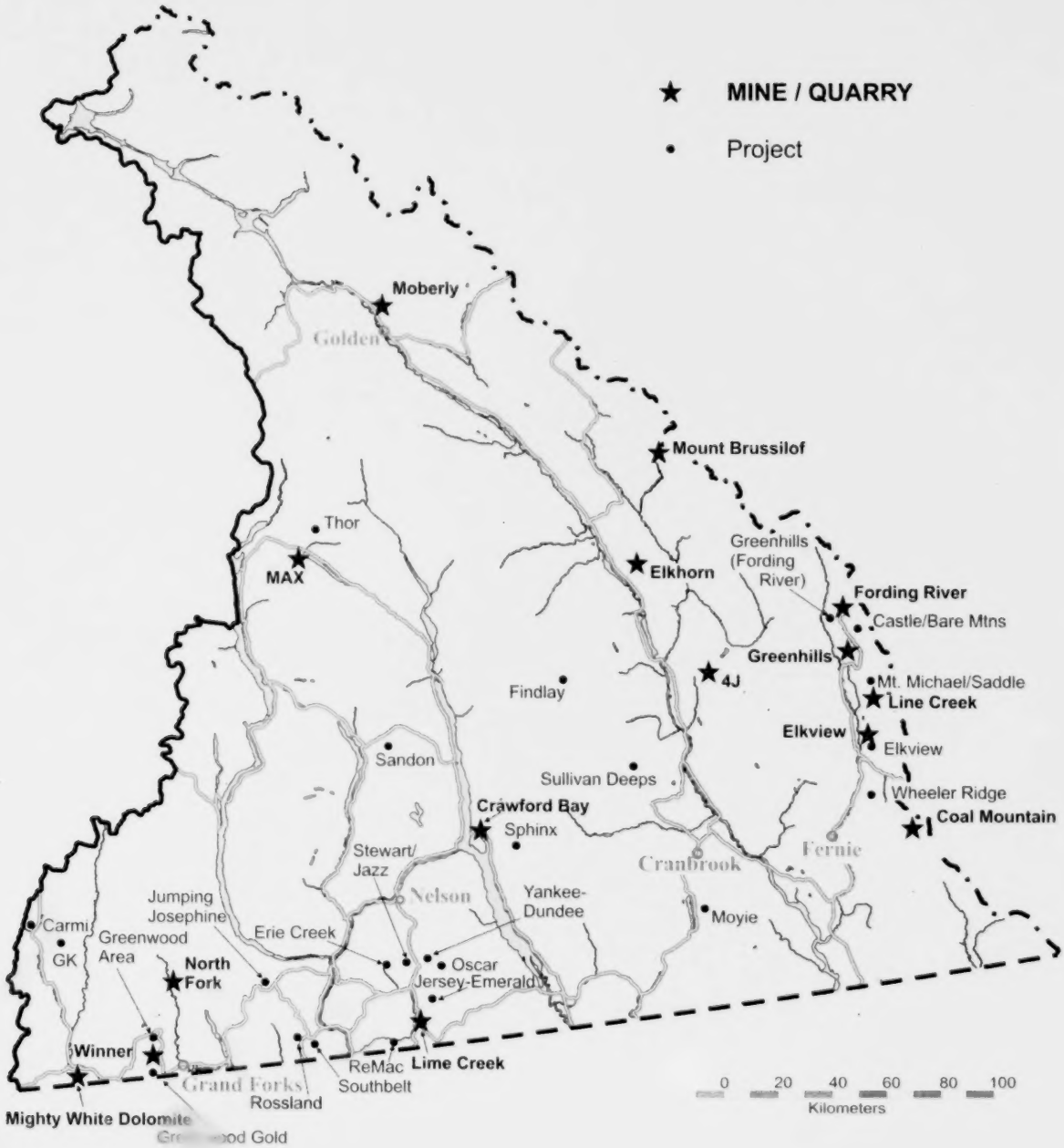

Figure 6.3. Mines, quarries and major exploration projects, Kootenay Region, 2007.

TABLE 6.1. PRODUCING MINES AND QUARRIES, KOOTENAY REGION, 2007

Mine	Operator	Commodity	Employment	Forecast Production in 2007 (million tonnes)	Proven and Probable Reserves as of December 31, 2006 (million tonnes)
Coal					
Coal Mountain	Elk Valley Coal Corporation	Metallurgical coal	185	2.16	26
Elkview	Elk Valley Coal Corporation	Metallurgical coal	760	5.08	239
Fording River	Elk Valley Coal Corporation	Metallurgical coal	919	7.90	227
Greenhills	Elk Valley Coal Corporation	Metallurgical coal	460	4.15	96
Line Creek	Elk Valley Coal Corporation	Metallurgical and thermal coal	345	2.30	17
Industrial Minerals (selected)					
4J	Georgia-Pacific Canada Inc	Gypsum	3	0.250	
Crawford Bay	Imasco Minerals Inc	Dolomite		0.055	
Elkhorn	CertainTeed Gypsum Canada	Gypsum	21	0.525	
Lime Creek	Imasco Minerals Inc	Limestone			
Moberly	HCA Mountain Minerals (Moberly) Ltd	Silica sand	16	0.100	
Mount Brussilof	Baymag Inc	Magnesite	24	0.100	
North Fork	Roxul (West) Inc	Monzonite (mineral wool)			
Rock Creek	Mighty White Dolomite Ltd	Dolomite			
Winner	Roxul (West) Inc	Gabbro (mineral wool)			
Metals					
MAX	Roca Mines Inc	Molybdenum			

Metasediments of the Lower Cambrian to Middle Devonian Lardeau Group at the MAX property are intruded by the Cretaceous Trout Lake stock. The deposit is a pipe-like quartz vein stockwork that extends from surface to a depth of at least 1000 ms, in which molybdenite occurs mainly along margins of veins. The vein stockwork is best developed in close proximity to the margins of the intrusive and its associated offshoots.

COAL

Elk Valley Coal Corporation, the world's second-largest supplier of seaborne metallurgical coal, operates five large open pit coal mines in the Elk valley area. Projected total 2007 coal production at the company's **Coal Mountain**, **Elkview**, **Line Creek**, **Greenhills** and **Fording River** operations is approximately 21.6 million tonnes of clean coal (predominantly metallurgical; see Table 6.1 for individual mine production and reserve statistics), up slightly from 2006. The mines employ 2670 people and make a huge contribution to the local, regional and provincial economies.

INDUSTRIAL MINERALS

The Kootenay region continues to be an important source of a variety of industrial minerals, including magnesite, gypsum, silica, dolomite, limestone, tufa,

flagstone, slate, dimension stone, aggregate and slag.

Baymag Inc produces high-quality magnesite from its open pit mine near **Mount Brussilof** (MINFILE 082JNW001), northeast of Radium. Magnesite is transported by truck to Exshaw, Alberta, where the company has facilities for producing calcined and fused magnesia (MgO). Production in 2007 was projected to be approximately 100 000 tonnes.

There are two gypsum producers in the Kootenay region. CertainTeed Gypsum Canada operates the **Elkhorn** mine (MINFILE 082JSW021) east of Windermere, and Georgia-Pacific Canada Inc operates the **Four J** mine (MINFILE 082JSW009) southeast of Canal Flats. Production at the Elkhorn mine was projected to be approximately 525 000 tonnes for 2007. Production for the Four J mine was projected to be more than 250 000 tonnes.

Silica is produced from quartzite by HCA Mountain Minerals (Moberly) Ltd from the **Moberly** mine (MINFILE 082N 001) and plant, north of Golden. Mine production in 2007 was predicted to be 100 000 tonnes.

Imasco Minerals Inc produces a variety of crushed and ground rock products at its Creston Operations Plant at **Sirdar**; rock types include limestone, dolomite, granite and quartzite. Raw sources for these products include an underground dolomite mine at **Crawford Bay** (MINFILE 082FNE113), a limestone quarry at **Lime Creek** (MINFILE 082FSW307) east of Salmo, and a granite quarry at **Sirdar** (MINFILE 082FSE072). Production of dolomite at Crawford Bay was expected to be 55 000 tonnes in 2007.

Mighty White Dolomite Ltd produces a range of crushed and ground dolomite products from its quarry (MINFILE 082ESE200) and plant at **Rock Creek**.

The **Winner** gabbro quarry (MINFILE 082ESE265), west of Grand Forks, and the **North Fork** monzonite quarry, north of Grand Forks, both supply feed for the Roxul (West) Inc mineral wool (insulation) manufacturing plant in Grand Forks. Production at the North Fork quarry is winding down; it will be replaced by a talus quarry at Burrell Creek. A bulk sample from the Burrell Creek site, 10 km to the north, was collected for testing purposes this year.

EXPLORATION HIGHLIGHTS

Major 2007 mineral and coal exploration projects in the Kootenay Region are listed in Table 6.2 and their locations are shown on Figure 6.3. Generally these major exploration programs involved expenditures in excess of $500 000 on work that included mechanized ground disturbance, for example, drilling, trenching or bulk sampling. Except where otherwise indicated, the following information was derived from discussions with industry project staff, as well as company reports, presentations, press releases and Internet websites.

EAST KOOTENAYS

Eagle Plains Resources Ltd, a Cranbrook-based junior company, carried out its third year of diamond drilling on the **Sphinx** molybdenum property (MINFILE 082FNE004, 094 and 095) near Gray Creek Pass, 45 km west of Kimberley. The Sphinx property is underlain by sedimentary strata of the upper part of the Purcell Supergroup, including the Dutch Creek and Mt. Nelson formations, which have been intruded by Cretaceous quartz monzonite. Pervasive alteration is developed in the sedimentary and intrusive rocks. Molybdenum (and associated tungsten) mineralization is hosted within quartz-pyrite stockwork veins and fractures within the alteration zone. An inferred resource of 62 million tonnes grading 0.058% MoS_2, using a cut-off grade of 0.0167% MoS_2, was estimated in 2006. The resource is open in two directions and at depth, and is being viewed as a bulk-tonnage target. Highlights of the 2007 drill campaign included 0.142% MoS_2 over 29.0 m, including 0.173% MoS_2 over 19.0 m and 0.469% MoS_2 over 3.0 m.

Stikine Gold Corporation's **Sullivan Deeps** project, one of the most exciting programs in the region over the past three years, continued into 2007. The third deep drillhole (known as SD3) targeting Sullivan-style sedex mineralization approximately 8 km north of Kimberley was collared in 2006 and completed this year. Unfortunately, SD3 also marks the conclusion of the project. The Sullivan Deeps project was targeting a postulated "sister deposit" to the Sullivan lead-zinc ore body (MINFILE 082FNE052) in the Aldridge Formation, Purcell Supergroup. The Sullivan horizon, the stratigraphic position of the Sullivan and some other known sedex occurrences in the East Kootenays, were successfully intersected in all three drillholes (at depths of 2736 m, 2365 m and 2659 m), and in all three cases the horizon was host to sulphide mineralization. Drillhole SD3 intersected 0.4 m of mainly pyrrhotite.

Eagle Plains Resources Ltd drilled the **Findlay** project (MINFILE 082KSE060, 081), 25 km west of Canal Flats. As with the Sullivan Deeps project, the target on the Findlay is sedex-style zinc-lead mineralization in the Aldridge Formation, Purcell Supergroup. In contrast with the Sullivan mine deposit, known mineralization on the Findlay property appears to occur in the upper member of the Aldridge Formation.

Also in the East Kootenays, the St. Eugene Mining Corporation drilled its **Moyie** property 25 km south of Cranbrook. The target is Coeur d'Alene-style vein-hosted zinc-lead-silver mineralization in the lower Purcell Supergroup, associated with southeast-trending structures, including the St. Eugene break that appears to have controlled the deposition of the **St. Eugene** mine (MINFILE 082GSW025) and other occurrences on the property. Mineralization potentially coincides with the intersection of this type of structure with north-south trending synrift faults (associated with sub-basins in the Aldridge Formation). Drill results in 2007 from the

TABLE 6.2. MAJOR EXPLORATION PROJECTS, KOOTENAY REGION, 2007

Property	Operator	MINFILE	NTS	Commodity	Target Type	Work program	Metres of drilling (estimated in some cases)
Carmi	Hi Ho Silver Resources Ltd	082ENW036	82E/11E	Mo	porphyry	G, 3D-IP, DD	4700
Castle Mountain/Bare Mountain	Elk Valley Coal Corporation	082JSE006, 008	82J/02W	coal	sedimentary	A, RC	16 106
Elkview	Elk Valley Coal Corporation	082GNE013, 016, 017	82G/15W	coal	sedimentary	RC	5448
Erie Creek	Jasper Mining Corporation	082FSW213, 226, 301	82F/6W	Au, Mo, W, Cu, Pb, Zn	porphyry, polymetallic vein, skarn	GC, DD	4138
Findlay	Eagle Plains Resources Ltd	082KSE060, 081	82K/01E	Zn, Pb	sedex	G, DD	2962
GK	Bitterroot Resources Ltd	082ESE175, 217, 252, 256	82E/7W	Au	vein	TR, DD	6064
Greenhills (Fording River)	Elk Valley Coal Corporation	082JSE010	82J/02W	coal	sedimentary	RC	16 641
Greenwood Area properties	Kettle River Resources Ltd	082ESE020, 062	82E/2E	Au, Ag, Cu	epithermal vein, mesothermal vein, skarn	G, MG, GC, TR, DD	1485
Greenwood Gold	Merit Mining Corp	082ESE032, 033, 041, 042	82E/2E	Au, Cu	mesothermal vein/polymetallic vein	DD	3786
Jersey-Emerald	Sultan Minerals Inc	082FSW009, 010, 011, 218	82F/03E	Mo, W, Zn, Pb	porphyry (Mo) skarn (W) stratabound (Zn-Pb)	DD	9750
Jumping Josephine (JJ)	Astral Mining Corp	082ESE083-087	82F/5W	Au	intrusion-related	DD	7727
MAX	Roca Mines Inc	082KNW003, 004	82K/12E	Mo	porphyry	DD	4800
Moyie	St. Eugene Mining Corporation	82GSW023, 025, 030	82G/5W	Pb, Zn, Ag	polymetallic vein	DD	4332
Mt. Michael/Saddle	Elk Valley Coal Corporation	082GNE022, 082JSE002	82G/15W, 82J/2W	coal	sedimentary	A, RC	9583
Oscar	Dajin Resources Corp	082FSW012, 022, 255	82F/3E, 82F/6E	Zn, Pb	stratabound, oxide	GC, DD	2700
ReMac	ReMac Zinc Corp	082FSW024, 026, 219	82F/3W	Zn, Pb	stratabound, oxide	DD	6500
Rossland	West High Yield (W.H.Y.) Resources Ltd	082FSW119, 116, 117	82F/4W	Au, Ni, Mg	mesothermal vein, ultramafic	DD	6160
Sandon	Klondike Silver Corp	082FNW043, 050	82F/14W	Ag, Pb, Zn	polymetallic vein	G, GC, GP, TR	0
Southbelt	Vangold Resources Ltd	082FSW123, 145, 146	82F/4W	Ag, Au, Pb, Zn, Cu	polymetallic vein	GC, DD	1524
Sphinx	Eagle Plains Resources Ltd	082FNE004, 094, 095	82F/10E	Mo, W	porphyry	DD	2344
Stewart/Jazz	Emgold Mining Corporation	082FSW229, 251, 277, 311	82F/06W	Mo, W, Au, Pb, Zn, Ag	porphyry, skarn, polymetallic vein	TR, DD	3350
Sullivan Deeps	Stikine Gold Corporation	-	82F/16E	Zn, Pb, Ag	sedex	DD	1517
Thor	Taranis Resources Inc	082KNW030, 031, 060, 061, 062	82K/11W	Au, Ag, Cu, Pb, Zn	polymetallic vein	G, TR, MG, VLF, DD	3562
Wheeler Ridge	Elk Valley Coal Corporation	-	82G/10W	Coal	sedimentary	A, RC, BU	4645
Yankee – Dundee	Dundee Mines Ltd	082FSW067, 068	82F/06E	Au	mesothermal vein	DD, AB-EM, AB-MG	2000

Work Program Abbreviations:
A = access; trail, road construction on claims; AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X tonnes) = bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (Xm) = diamond drilling totaling X metres; EN = environmental baseline studies/monitoring, remediation work; FS = feasibility studies; G = geology, mapping, etc; GC = geochemical sampling (rock, soil, silt, etc); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; 3D-IP; MG = magnetics; MK = marketing-primarily for industrial mineral products; MS = metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; PP = Pilot plant, R = reclamation; RC = reverse circulation drilling; TR = trenching, UG (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

Society Girl target area (MINFILE 082GSW030) included 4.45% Zn, 8.56% Pb, and 85 g/t Ag over a true width of 3.4 m.

Companies exploring for gold in the Cranbrook area in 2007 included Ruby Red Resources Inc and Klondike Gold Corp. Klondike Gold also continued to drill for sedex mineralization in the Aldridge Formation on some of its East Kootenay properties.

EAST KOOTENAY COALFIELDS

Exploration in the coal-bearing Jurassic-Cretaceous strata of the Mist Mountain Formation (collectively known as the East Kootenay coalfields where they occur in British Columbia) in 2007 was carried out exclusively by Elk Valley Coal Corporation. Their work contributed significantly to the overall exploration totals in southeast BC. Not including in-pit drilling at Elk Valley Coal's five mines, coal exploration expenditures totalled over $6.3 million and the exploration drilling totalled over 52 000 m. Four of the five mines carried out major exploration programs in 2007, all aimed at establishing reserves outside of the active pits.

Beginning in the south, Coal Mountain Operations continued to assess the potential of the **Wheeler Ridge** area in the Crowsnest Coalfield, roughly 19 km northeast of Fernie and immediately south of Parcel 73 of the Dominion Coal Block (MINFILE 082GNE008). This site is not structurally contiguous with Coal Mountain and is approximately 18 km distant. Surface-mineable coal at Wheeler Ridge is of higher volatile-matter content than current typical products from Elk Valley's mines. Part of the focus of the 2007 work was testing the potential of large-diameter core and reverse-circulation drilling for low-cost collection of bulk samples.

Elkview Operations carried out rotary-drilling programs in the **Baldy Ridge** (MINFILE 082GNE016) and **Natal Ridge** (MINFILE 082GNE013) areas, both within their current permitted area.

The other major coal exploration programs were in the Elk valley coalfield. Line Creek Operations drilled on **Mt. Michael** (MINFILE 082GNE022) and the **Saddle** property (MINFILE 082JSE002), approximately 3 km and 6 km, respectively, north along strike from the active mine area, and roughly 9 km southeast of Elkford. Surface-mineable coal-bearing strata at both target areas are on the east limb of the Alexander Creek syncline, dip moderately to the west, and are separated by the west-dipping Ewin Pass thrust fault.

Fording River Operations drilled on both **Castle Mountain** (MINFILE 082JSE008) and **Bare Mountain** (MINFILE 082JSE006), 5 and 10 km, respectively, south of and along strike from active pits on Eagle Mountain (MINFILE 082FSE009), and roughly 10 km northeast of Elkford. Coal-bearing strata at these locations are preserved in the Alexander Creek syncline.

Fording River Operations also drilled on the **Greenhills** (MINFILE 082JSE010) portion of their property, which is north of and on strike with Elk Valley Coal's Greenhills Operations within the Greenhills syncline. This program is targeting areas of potential economic coal below previous open pits.

WEST KOOTENAYS

The **Jersey-Emerald** project 10 km south of Salmo was the site of extensive drilling by Sultan Minerals Inc. The underground **Jersey** lead-zinc and **Emerald** tungsten mines (MINFILE 082FSW009, 010, 011 and 218) closed in 1973. Exploration by Sultan over the past few years has focused on molybdenum and tungsten, and work expanded to include zinc and lead in 2007.

Drilling in 2007 was designed to test the East Emerald tungsten zone, the East Dodger tungsten zone and the Dodger molybdenum zone, as well as extensions to the Jersey zinc-lead deposit. A preliminary scoping study to determine economic parameters for a mining plan (tungsten only) was completed in May. Engineering and environmental-baseline studies are also underway throughout the property.

Sultan Minerals personnel were aware of six unmined tungsten targets reported by operator Placer Dome at the time of the closure of the Emerald mine. These targets occur as broad linear bands trending for more than 1500 m to the north and south of the old mine workings. In addition, another target referred to as the East Emerald tungsten zone, associated with a unit referred to historically as the 'lower skarn horizon', was identified by Sultan Minerals from historic mine plans and drill logs. This new zone lies between the Invincible and Dodger tungsten zones, and has been shown to extend more than 1100 m in length and up to 300 m downdip. Combined measured and indicated resources of 2.51 million tonnes at 0.37% W (at a 0.15% cut-off grade) in the Emerald mine were calculated in November 2006.

Molybdenum-bearing, granitic intrusion-hosted quartz stockworks lie beneath the old tungsten mine workings in the East Dodger mine area. The recently-discovered Dodger molybdenum zone has an inferred resource of 481 000 tonnes at 0.103% MoS_2 (at a 0.05% cut-off grade).

Stratabound zinc-lead mineralization in the Jersey mine is associated with Paleozoic carbonates near the south end of the Kootenay Arc. A previously unknown extension of the zinc-lead mineralization was found this year; this extension encompasses over 400 m of strike length.

Carbonate-hosted zinc-lead mineralization in the Kootenay Arc was also the target for drilling done by the ReMac Zinc Corporation on its **ReMac** project east of Trail (Figure 6.4). The company's holdings include the past-producing **Reeves-McDonald** (MINFILE 082FSW026) and **Annex** (MINFILE 082FSW219) mines,

Figure 6.4. Drilling on the ReMac property, ReMac Zinc Corp.

and the 2007 objective was to expand the resource potential on the property and to identify zones to investigate for possible future underground exploration. Both sulphide and oxide mineralization types are known to occur.

Dajin Resources Corp undertook a drilling program on the **Oscar** property, which includes the **Oxide** (MINFILE 082FSW022) and the **Jackpot** (MINFILE 082FSW012) occurrences, 5.5 km east of Ymir. The target on the Oscar property is carbonate-hosted zinc-lead mineralization in the Kootenay Arc, and, as with the ReMac, both sulphide and oxide forms of mineralization are known to occur.

Extensive underground drilling by Roca Mines Inc at the new **MAX** molybdenum mine was successful in extending the depth of observed mineralization by at least 200 m below the known resource (see previous property description).

The **Thor** property of Taranis Resources Inc, which is about 7 km northeast of Trout Lake in the Lardeau area, includes several past producers of base and precious metals, including the **True Fissure** (MINFILE 082KNW030) and **Great Northern** (MINFILE 082KNW061). Ground-based geophysical surveys, trenching and drilling focused on a mineralized unit which extends for over 1.4 km. Polymetallic (silver, lead, zinc, gold and copper) veins are within the Broadview Formation (Lardeau Group) in the north part of the Kootenay Arc. Drill results include 5.07% Zn, 4.07% Pb, 0.26% Cu, 1.59 g/t Au and 296.12 g/t Ag over 1.95 m.

Drilling on the large **Jumping Josephine** (or JJ) property, 22 km west of Castlegar and just north of Highway 3, by Astral Mining Corporation, targeted three areas of known gold mineralization: **JJ Main zone** and **Bonanza Pass**, both recent discoveries, and the **Albion-Dubrovnik** (MINFILE 082ESE086) area in the Granville Mountain mining camp. The main focus, as in 2006, was on the JJ Main zone. Gold-bearing quartz stockworks initially uncovered by trenching in 2006 were the main drilling target in the JJ Main zone, but drillholes also tested the potential for a porphyry system at depth. Mineralization in the JJ Main zone consists of quartz stockworks, vein-breccias and sheeted veins associated with a northeast-trending shear zone in mid-Jurassic Nelson-suite intrusions. Eocene intrusions were a possible source of the gold. Geology, geophysics and geochemistry suggest that the host structure may extend for over 3 km. Drill assay results in 2007 included 12.44 g/t Au over 8 m, including 26.9 g/t over 3 m.

Klondike Silver Corporation continued to progress with its **Sandon** project in the Slocan Silver Camp, 10 km east of New Denver. Work in 2007 focused on rehabilitation of underground workings at the **Wonderful** (MINFILE 082FNW043) and **Silvana** (MINFILE 082FNW050) mines, underground development, and refurbishing of the Silvana mill at Sandon town-site. Ongoing surface geophysical and geochemical surveys continued over portions of the company's Slocan-area holdings. In the process of upgrading the underground workings, the company has encountered vein-style mineralization, some of which had been previously developed. The company has begun to produce some of these veins and process them at the Silvana mill. Vein-hosted mineral occurrences in the Sandon area are hosted by sheared and brecciated argillite and slate of the Triassic Slocan Group which are intruded by granodiorite and quartz monzonite dikes.

On the **Yankee-Dundee** property in the Ymir area, 11 km northeast of Salmo, Dundee Mines Ltd is focusing on high-grade gold-quartz veins in the Ymir Group. Its holdings include the past producers **Yankee Girl** (MINFILE 082FSW068) and **Dundee** (MINFILE 082FSW067); extensions and components of the vein systems at these locales are being targeted. Drilling results in 2007 included 6.01 g/t Au over 1.54 m (before ending in old workings).

Jasper Mining Corporation carried out soil sampling and diamond drilling its multi-element **Erie Creek** project (MINFILE 082FSW213, 226, 301), approximately 12 km northwest of Salmo. Jurassic Rossland Group rocks on the property are intruded by the Middle to Late Jurassic Nelson intrusions, locally known as the Erie Creek stock. The company is pursuing a porphyry model for mineralization, which appears to be borne out by metal zonation. At the **Hattie** occurrence (MINFILE 082FSW226), for example, an inner quartz-molybdenum

plus scheelite zone is surrounded by a chalcopyrite zone, a pyrite-pyrrhotite zone and an outer sphalerite-galena zone.

Emgold Mining Corporation's **Stewart/Jazz** property, 9 km north of Salmo, is host to molybdenum, tungsten and gold mineralization. Gold appears in part to be related to the Silver King intrusive, which is prospective on Sultan Minerals' Kena property (MINFILE 082FSW237) adjacent to the north. The **Stewart** molybdenum zone (MINFILE 082FSW229) is related to breccia phases in intrusive rocks, while tungsten at the **Arrow** zone (MINFILE 082FSW311) is associated with skarn zones adjacent to granitic dikes and sills. Shear-hosted vein mineralization, including sphalerite and galena, near the margins of a granitic stock characterize the **Free Silver** zone (MINFILE 082FSW277).

BOUNDARY DISTRICT

Merit Mining Corp made major advancements on its **Greenwood Gold Project**, 13 km west of Grand Forks, in 2007. The company has been dewatering and rehabilitating the underground workings on the **Lexington-Grenoble** gold-copper deposit (MINFILE 082ESE041), in preparation for extraction of a 10 000-tonne bulk sample (Figure 6.5). Construction is underway on a 200 tonnes-per-day mill (the 'Greenwood' mill). The mill and tailings facilities will be capable of processing the bulk sample, as well as mined ore should the project advance to production. An application for a Small Mine permit was submitted to the Ministry of Energy, Mines and Petroleum Resources in late 2007; Merit Mining hopes to be in production by 2008.

A preliminary economic assessment was made earlier this year, and diamond drilling was carried out on the Lexington-Grenoble and the adjacent **Golden Crown** (MINFILE 082ESE032, 033). Lexington-Grenoble deposit resources include 297 000 tonnes combined measured and indicated resources, containing 8.36 g/t Au and 1.35% Cu at a cut-off grade of 6.0 g/t Au equivalent. The project resource base was increased by 164% in 2007 with completion of a resource estimate on the adjacent Lone Star deposit in Washington State.

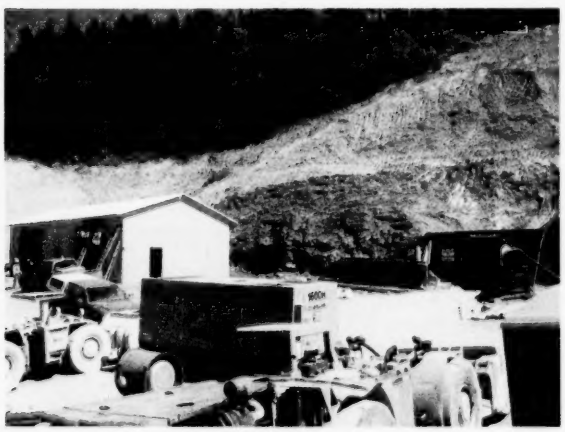

Figure 6.5. The Lexington portal and surface facilities on the Greenwood Gold Project, Merit Mining Corp.

The Lexington-Grenoble deposit is hosted by an altered package of dacitic to andesitic tuffs. Mineralization, which is believed to have been emplaced during development of the Republic graben, is hosted by sub-parallel lenses of disseminated to narrow veins of pyrite, chalcopyrite and quartz (with or without native gold) within tuffs adjacent to a fault contact with serpentinite.

In the same area, Kettle River Resources Ltd was active on a few fronts within its **Greenwood Area** holdings, which encompass many known mineral deposits and occurrences, including the past-producing **Phoenix** (MINFILE 082ESE020) and **Emma** (MINFILE 082ESE062) mines. Notably, trenching and diamond drilling in 2007 on the **Minnie Moore** property, northeast of the Emma, focused on a new discovery within a limestone-hosted, epithermal siliceous breccia zone. Elevated gold and silver values were found in grab and trench samples.

At the **Carmi** molybdenum property (MINFILE 082ENW036), 11 km northwest of Beaverdell, Hi Ho Silver Resources Inc worked to expand the known mineralized zones and confirm previously-reported grades. Ground-based geophysical surveys and trenching, along with two diamond-drilling programs, were carried out on the Lake Zone and E Zone. The Carmi property contains a porphyry-style molybdenum occurrence with copper, silver and gold. Molybdenite, along with pyrite, magnetite, chalcopyrite and minor bornite, occurs mainly within two sheared and brecciated zones in gneissic granodiorite, quartz diorite and diorite of the Jurassic Nelson intrusive suite (Assessment Report 28874). Recent drill results include 139.31 m of 0.128% MoS_2 in drillhole 07-192.

On the **GK** property (MINFILE 082ESE175), 11 km east of Beaverdell, Bitterroot Resources Ltd carried out trenching and drilling programs on the Bluejay and Hornet zones. Gold mineralization on the GK property is related to a high-level magmatic-hydrothermal system, and is closely associated with a suite of Tertiary alkalic intrusions (Assessment Report 28179). Mineralization consists of sulphide-enriched vein-breccia and stockwork containing pyrite, arsenopyrite, quartz and carbonate. One set of trench samples yielded 50.0 m grading 22.1 g/t Au.

West High Yield (W.H.Y.) Resources Ltd carried out a third major phase of diamond drilling on its **Rossland** project on the western outskirts of the town of Rossland. Past producers of gold on the company's property include the **Midnight**, **OK** and **IXL** (MINFILE 082FSW119, 116 and 117). Gold mineralization is associated with ultramafic contacts and a regional tectonic boundary, and consists of gold-bearing quartz-carbonate veins as

opposed to the more typical Rossland-style base metal sulphide-rich veins. Nickel, cobalt and magnesium associated with the Ivanhoe Ridge ultramafic body are also being evaluated and early results are encouraging.

In the same camp, Vangold Resources Ltd drilled its **Southbelt** property in 2007. The property includes the so-called Rossland South Belt veins, immediately south of the town of Rossland, including the **Mayflower** (MINFILE 082FSW146), **Bluebird** (MINFILE 082FSW145) and **Homestake** (MINFILE 082FSW123). The objective is to demonstrate continuity of known veins through previously-unexplored areas, and initial results appear positive. Known polymetallic (silver, gold, lead, zinc, copper) veins on the property are hosted by Jurassic Rossland Group rocks.

OUTLOOK FOR 2008

Next year will see the first full year of production from Roca Mines' MAX molybdenum mine.

Results from bulk sampling at Merit Mining's Greenwood Gold Project are anticipated, along with the processing of the Small Mine permit application.

There is every reason to believe that exploration and development activities will continue at high levels in the Kootenays. Past-producing camps and mine sites will continue to attract attention, as new technology and ideas are applied to areas of known mineralization. Continuing major projects should include the Jersey-Emerald, Jumping Josephine, Southbelt, Thor, ReMac, and several others. Other projects which didn't meet the definition criteria in 2007 should advance to "major project" status in 2008.

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